

5

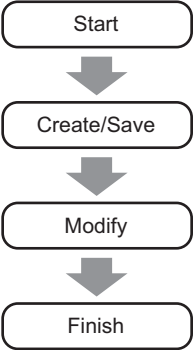
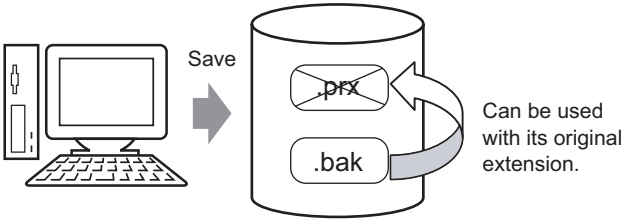
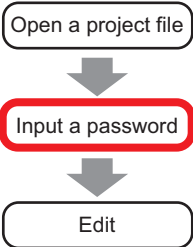
Start to Finish

This chapter covers the basics of GP-Pro EX from start to finish, including basic operations such as file management, project file backups, and address block conversion.

Please start by reading "5.1 Settings Menu" (page 5-2), and then turn to the corresponding page.

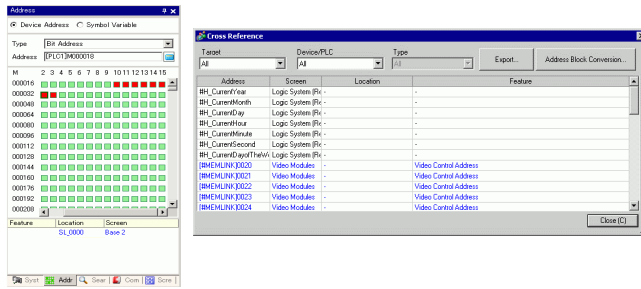
5.1	Settings Menu	5-2
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5.1 Settings Menu

Starting/Creating/Saving/Finishing	
 <pre> graph TD Start([Start]) --> CreateSave([Create/Save]) CreateSave --> Modify([Modify]) Modify --> Finish([Finish]) </pre>	<ul style="list-style-type: none"> ☞ Setup Procedure (page 5-10) ☞ Introduction (page 5-9)
Backing Up a Project File	
 <p>Save</p> <p>Can be used with its original extension.</p> <p>If a PRX file becomes corrupt, you can replace it with a backup BAK file.</p>	<ul style="list-style-type: none"> ☞ Setup Procedure (page 5-24) ☞ Introduction (page 5-23)
Entering a Password in a Project File	
 <pre> graph TD Open([Open a project file]) --> Input([Input a password]) Input --> Edit([Edit]) </pre> <p>Password protecting the project file ensures no unauthorized personnel can edit the project.</p>	<ul style="list-style-type: none"> ☞ Setup Procedure (page 5-28) ☞ Introduction (page 5-27)

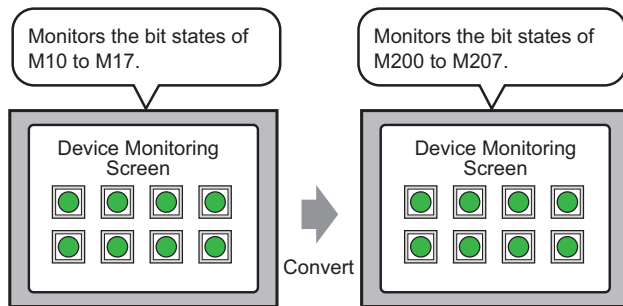
Confirming the Address List Used in a Project File

You can check the addresses specified in a project file using a map or list format.



- Setup Procedure (page 5-39)
- Introduction (page 5-38)

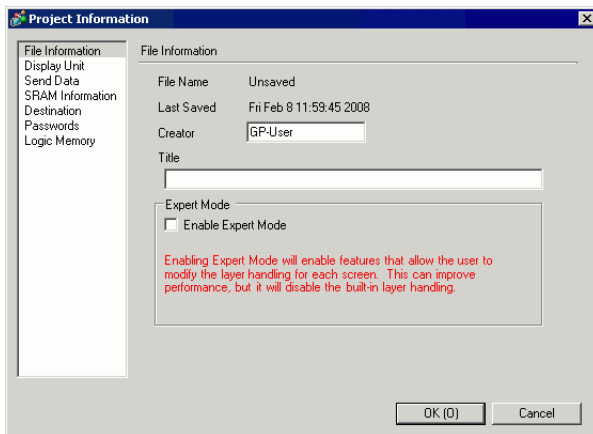
Converting Multiple Addresses



- Setup Procedure (page 5-48)
- Introduction (page 5-47)

You can convert addresses by specifying the start/end addresses before conversion and the start address after conversion.

Viewing the Project Information



- Setup Procedure (page 5-52)
- Introduction (page 5-51)

You can check information on files, models, sent data, SRAM, and memory usage.

Copying a Screen from Another Project

Copy from another Project

A.prx Base Screen 10

B.prx Base Screen 20

- ☞ Setup Procedure (page 5-56)
- ☞ Introduction (page 5-55)

Registering Addresses with Comprehensible Names

Name each address.

Address	Symbol Name
D100	Line A Production
D101	Line B Production
D102	Line C Production
D103	Line D Production

➔

You can set addresses with a symbol name.

Monitor Word Address

[PLC1]D0000

- Line A Production
- Line B Production
- Line C Production
- Line D Production

Data Type | 16 bit Dec

☺

You can name an address by registering the address as a symbol.

- ☞ Setup Procedure (page 5-60)
- ☞ Introduction (page 5-59)

Using Headers and Footers on a Screen

Create a footer.

Setting Input Screen | Active Operations Screen | Active Monitoring Screen | Alarm Screen

B1

Setting Input Screen

Setting Input Screen | Active Operations Screen | Active Monitoring Screen | Alarm Screen

B2

Active Operations Screen

Setting Input Screen | Active Operations Screen | Active Monitoring Screen | Alarm Screen

B3


Active Monitoring Screen

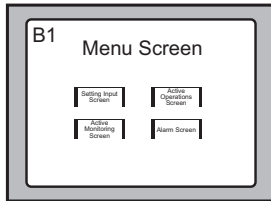
Setting Input Screen | Active Operations Screen | Active Monitoring Screen | Alarm Screen

You can display the same header or footer regardless of the active screen.

- ☞ Setup Procedure (page 5-69)
- ☞ Introduction (page 5-68)

Changing the Screen Number, Title, or Screen Color


 Base Screen

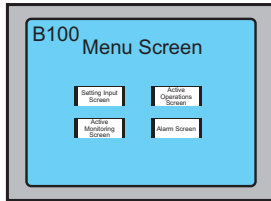


0001 Menu Screen





Change

 Base Screen

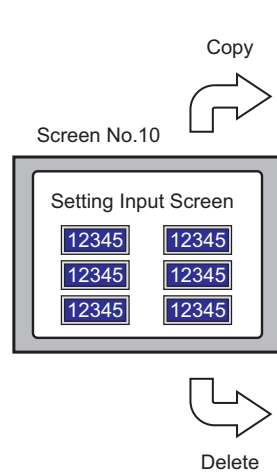


0100 Main Screen

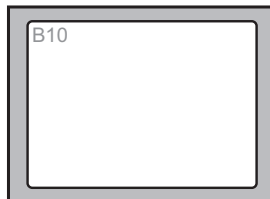
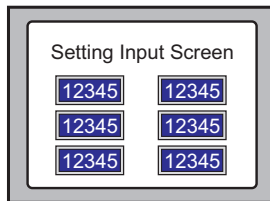
-  Setup Procedure (page 5-75)
-  Introduction (page 5-74)



You can change the specify screen number, screen title and screen color.

Copying/Deleting a Screen

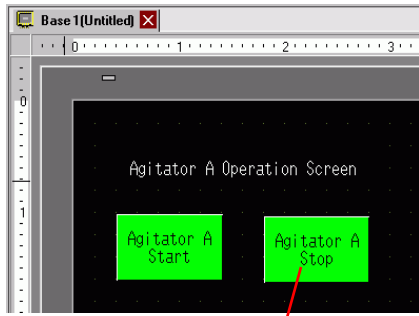


Screen No.20

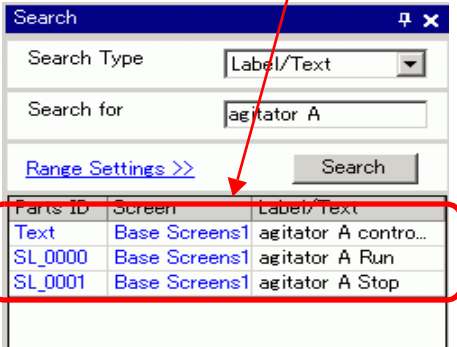


-  Setup Procedure (page 5-78)
-  Introduction (page 5-77)

Searching/Replacing Parts Addresses, Labels, and Comments in Parts



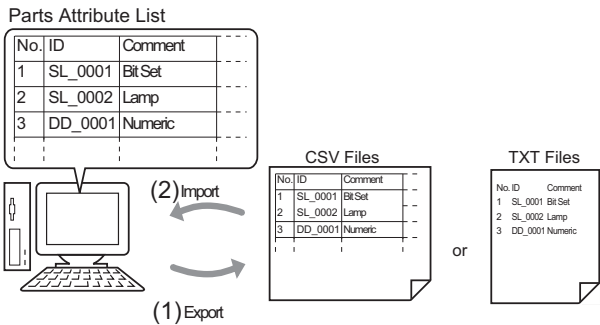
Search for Agitator A



- Setup Procedure (page 5-82)
- Introduction (page 5-81)

Changing Parts Attributes All at Once

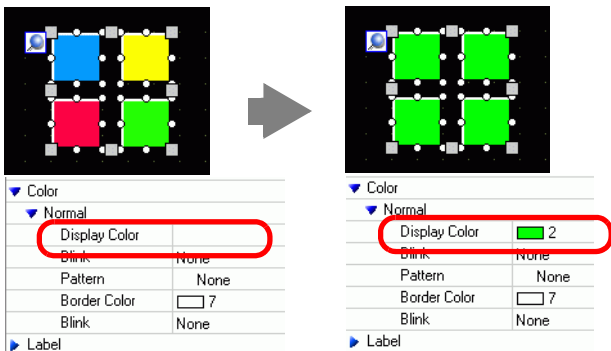
Export the list of the parts' attributes to a file, edit the attributes, and then import the changed data back to the original file.



- Setup Procedure (page 5-86)
- Introduction (page 5-85)

Changing Parts Attributes All at Once

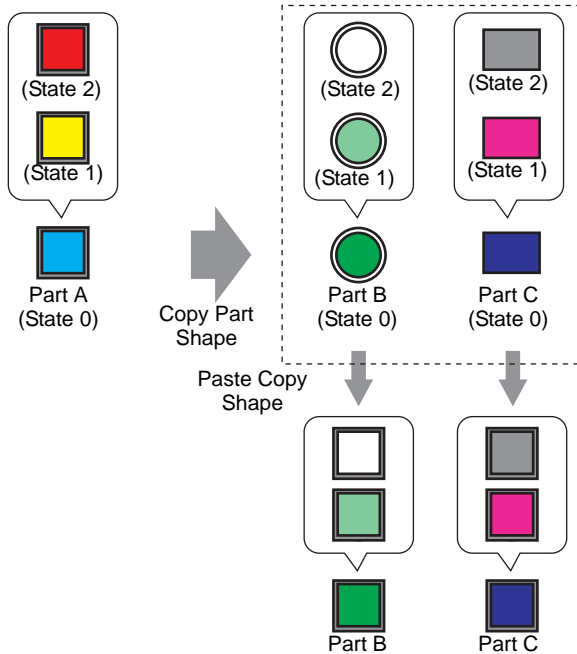
Select the same type of parts to change their attributes all at once.



- ☞ Setup Procedure (page 5-89)
- ☞ Introduction (page 5-85)

Changing All Parts Shapes

Copy the shape of each state in a part.



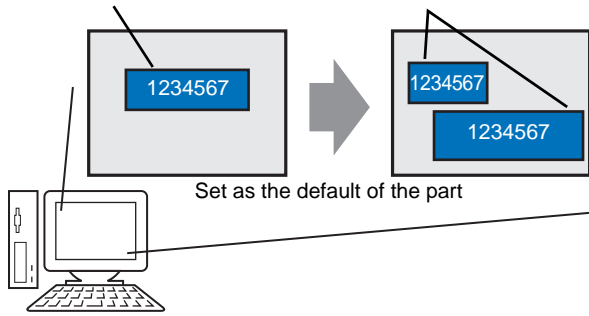
- ☞ Setup Procedure (page 5-92)
- ☞ Introduction (page 5-91)

Set as Default Using Placed Parts

When you set as default the properties from parts or drawings on a screen, the same attributes become the default when drawing parts and graphics on other screens.

Number of Display Digits: 7
Alarm Range : 4
Allow Input : Touch

Number of Display Digits: 7
Alarm Range : 4
Allow Input : Touch

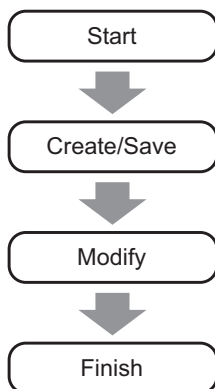


- ☞ Setup Procedure (page 5-95)
- ☞ Introduction (page 5-94)

5.2 Starting/Creating/Saving/Finishing

5.2.1 Introduction

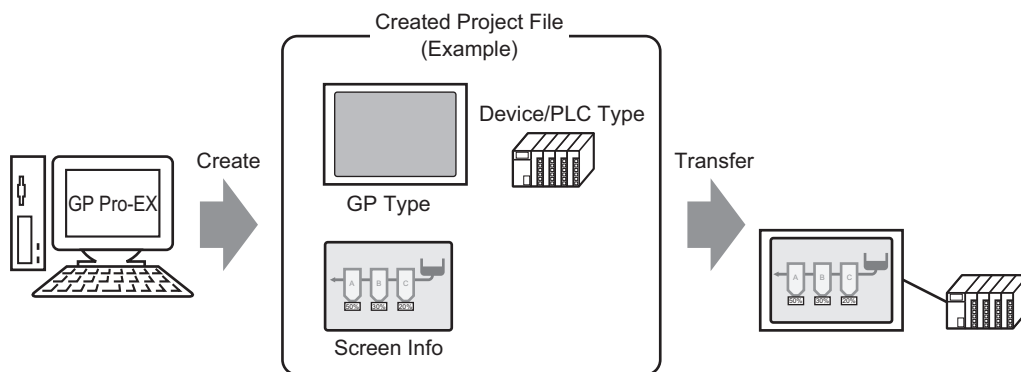
This section explains the work flow from starting GP-Pro EX to creating, saving, and editing project files.



Project File

A file created in GP-Pro EX is called a "Project File".

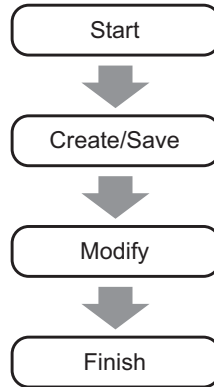
A project file (*.prx) contains the project screens, settings and functions for the display unit. Once you transfer a project file to a display, the display communicates with the device/PLC so that you can display and operate on the file.




5.2.2 Setup Procedure

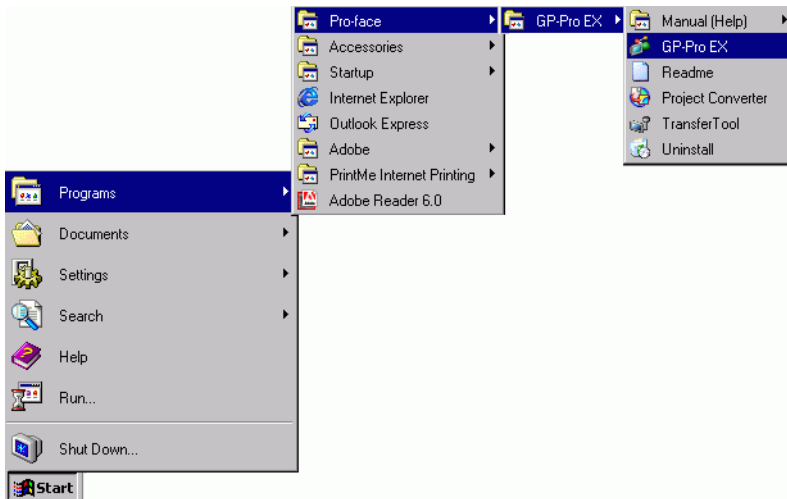
NOTE

- Please refer to the Settings Guide for details.
 - ☞ "5.17.2 [New] Settings Guide" (page 5-102)
 - ☞ "5.17.6 [System Settings] Setting Guide" (page 5-145)



■ Starting

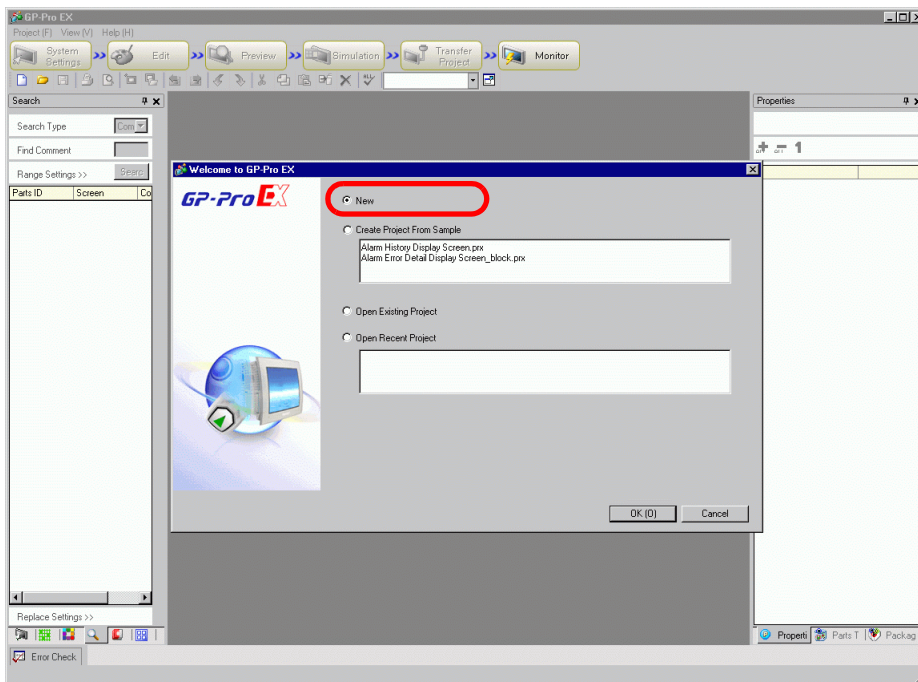
- 1 Double-click the  shortcut on the desktop screen or from the [Start] menu, point to [Program (P)], then [Pro-face], and select [GP-Pro EX *.*]. The asterisks ** define the version number.




2 GP-Pro EX opens and the screen appears as below.



3 The [Welcome to GP-Pro EX] dialog box appears. Select [Create new project] and click [OK].

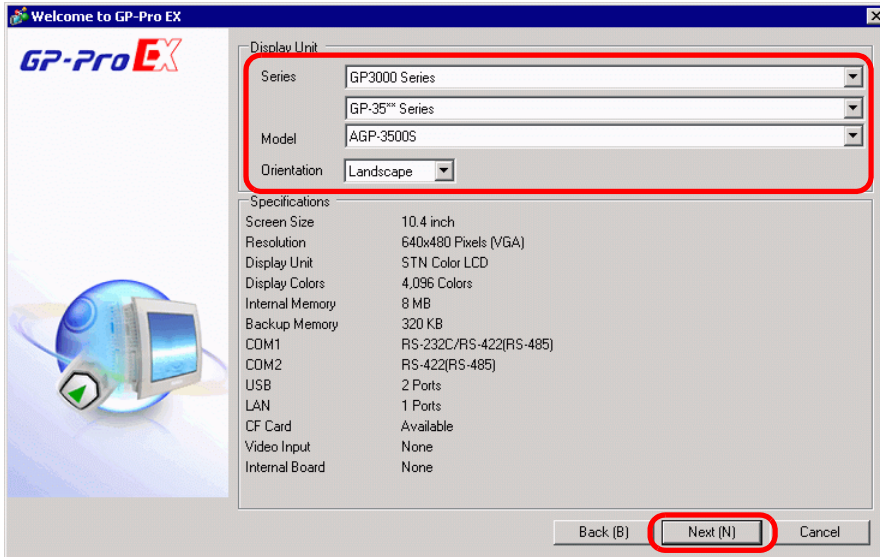


NOTE

- To create a new project, from the [Project (F)] menu, select [New (N)]. You can also click the , to create a new project. The [New Project File] dialog box appears.
- You can create a project file based on sample projects stored in the [Sample] folder. In the welcome dialog box, select [Create Project from Sample]. The project will be read-only. Save the file using the [Project (F)] menu's [Save As (A)] command.

4 In the next screen, select [GP3000 Series] from [Series], and then select the screen size series, [Model] and [Orientation]. Then click [Next].

☞ "3.3 Supported Model List" (page 3-8)



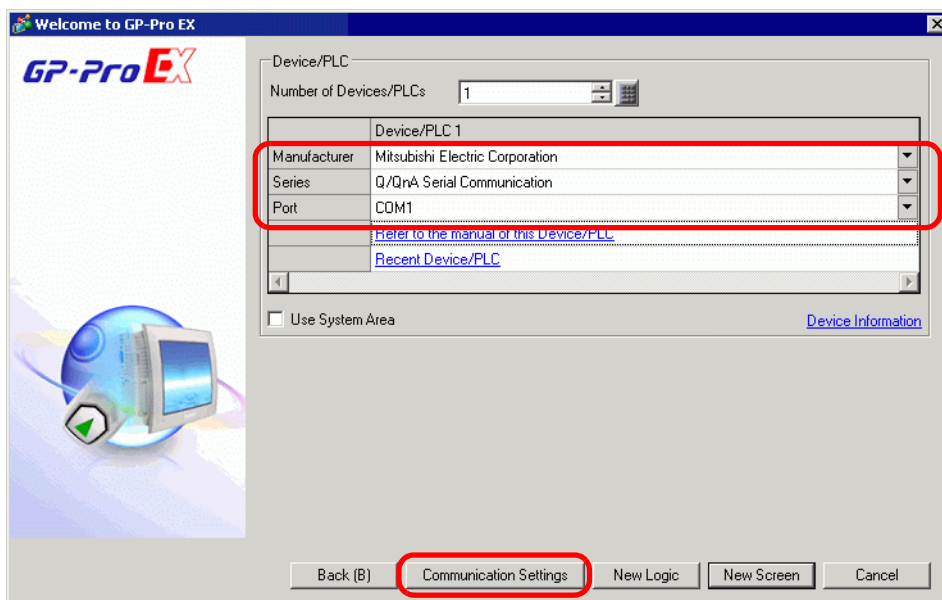
NOTE

- [Specifications] shows the detailed specifications of the selected display model.
- If you select [GP2000 Series], GP-Pro EX exits and GP-PRO/PB III for Windows starts. If GP-PRO/PB III for Windows is not installed, the application cannot start and you will return to GP-Pro EX.
- When you select the [IPC Series (PC/AT)], you do not need to set [Orientation]. Specify the data display size in [Screen Size].

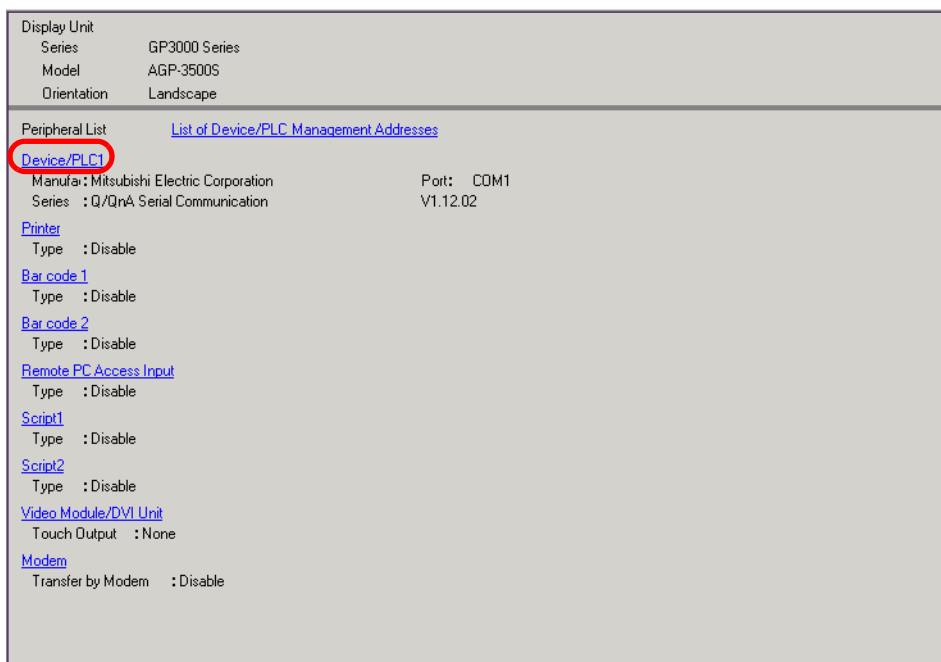
5 The following dialog box appears. Select [Manufacturer], [Series], and [Port], and then click [Communication Settings].

NOTE

- To create a screen without configuring communication settings for the device/PLC series, click [New Screen] to display the screen editor [Base 1]. To create a logic program, click [New Logic] to display the logic editor [Main].
☞ Chapter 29 "Logic Programming", page 29-1
- If you select the [Use System Area] check box, you can set up the GP internal system data area on the device/PLC.
☞ "5.17.6 [System Settings] Setting Guide ◆ System Area Settings" (page 5-174)



6 If you specify [Use System Area], you can assign the GP internal system data area to the device/PLC. When the [New Project File] dialog box closes and the [Peripheral List] appears in the main window, click [Device/PLC1].



7 When [Device/PLC] is displayed, specify the communication settings.

Device/PLC [Add Device/PLC](#) [Delete Device/PLC](#)

Device/PLC 1

Summary [Change Device/PLC](#)

Maker Series Port

Text Data Mode [Change](#)

Communication Settings

SIO Type RS232C RS422/485(2wire) RS422/485(4wire)

Speed

Data Length 7 8

Parity NONE EVEN ODD

Stop Bit 1 2

Flow Control NONE ER(DTR/CTS) XON/XOFF

Timeout (sec)

Retry

Wait To Send (ms)

RI / VCC RI VCC

In the case of RS232C, you can select the 9th pin to RI (Input) or VCC (5V Power Supply). If you use the Digital's RS232C Isolation Unit, please select it to VCC.

Device-Specific Settings

Allowable Number of Devices/PLCs

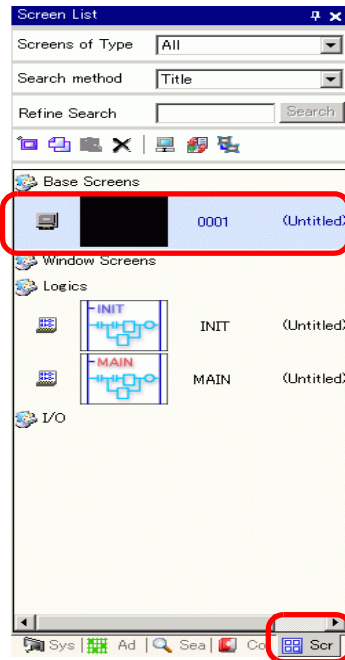
Number	Device Name	Settings
<input type="button" value="1"/>	<input type="text" value="PLC1"/>	<input type="text" value="Station No.=0,Network No.=0,PC No.=255,Request destination module I/O No.="/>

NOTE

- The [Communication Settings] details differ depending on the device/PLC series. See the "GP-Pro EX Device Connection Manual" for your device/PLC.
It is recommended to keep the initial settings for [Receive Timeout], [Retry], and [Wait to Send].

■ Creating/Saving

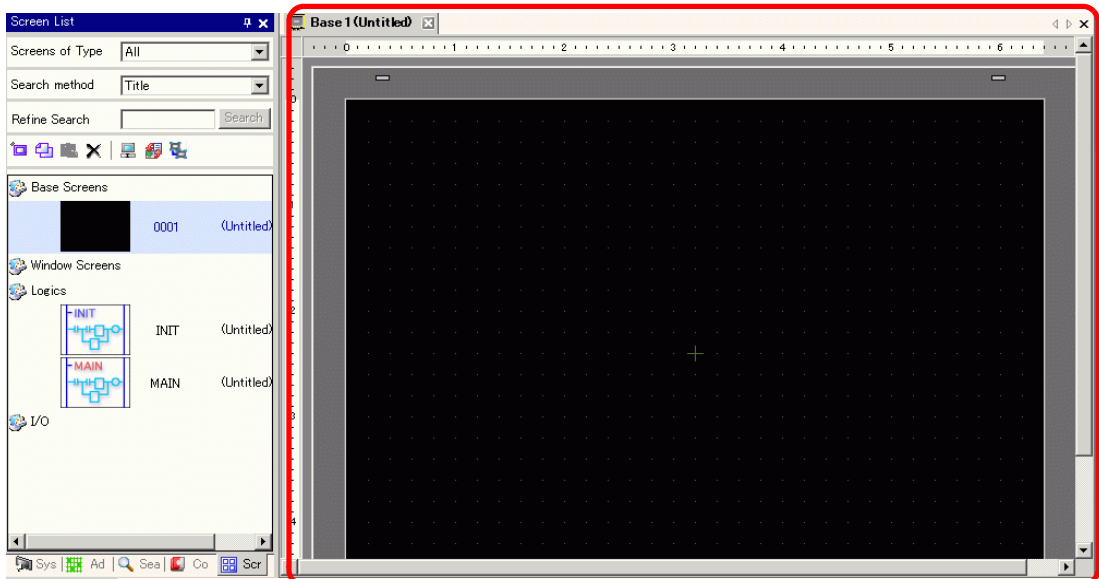
8 Open the Screen List window and double-click the base screen.



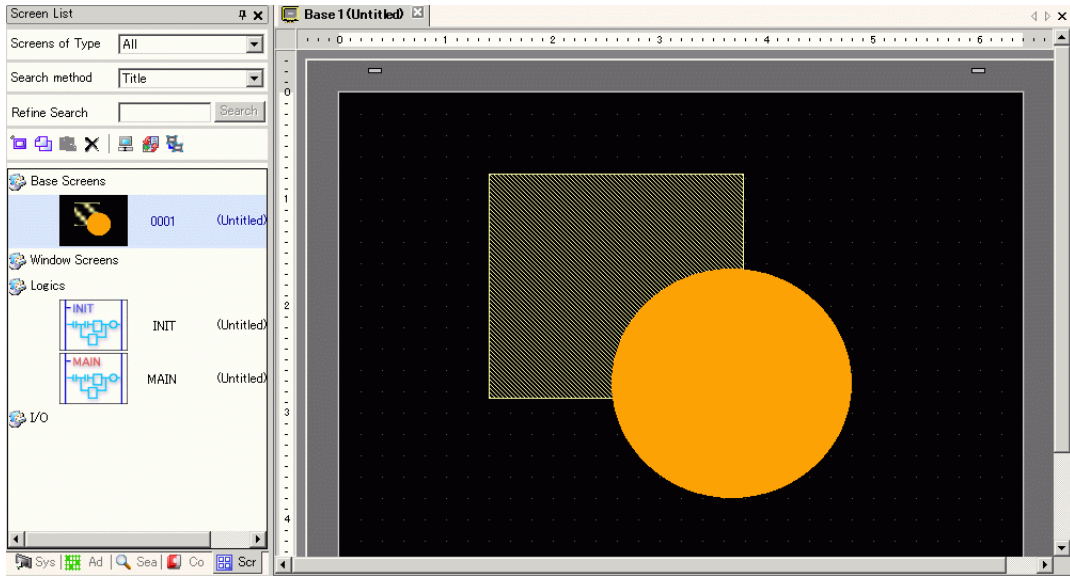
NOTE

- If the [Screen List] is not on the workplace, from the [View (V)] menu, point to [Work Space (W)] and select [Screen List (G)].
- To create a logic program, double-click the logic screen currently displayed. If you select a model that does not support the logic features, you can create the logic program but the program will not run on the display.
 ☞ Chapter 29 "Logic Programming", page 29-1


9 The [Base Screen] displays, as shown.

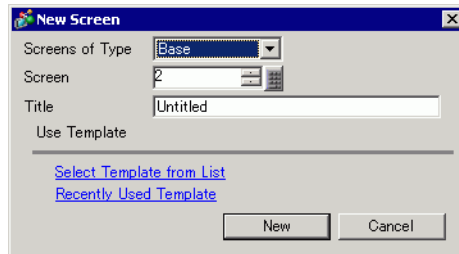


10 Create a screen.

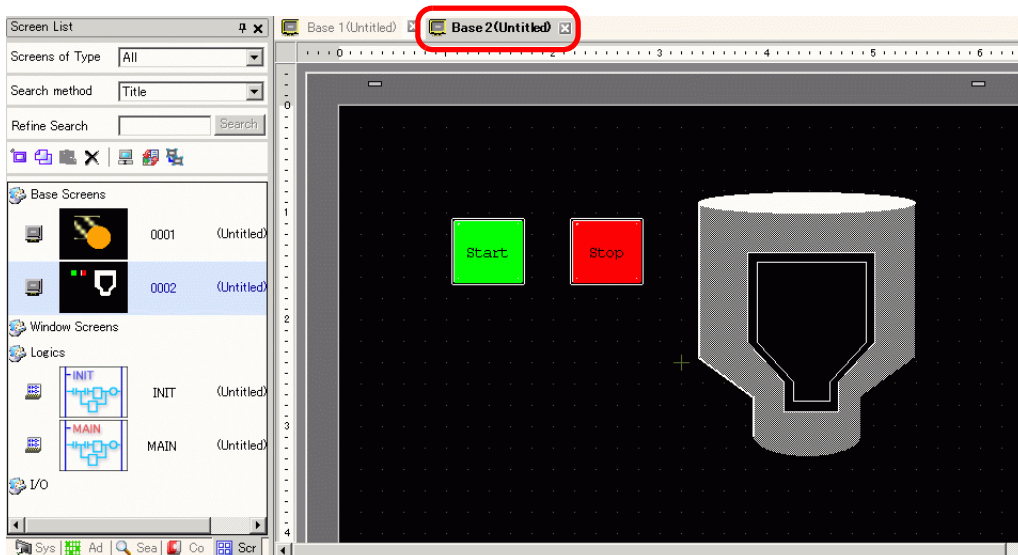


11 Add a new screen.


From the [Screen (S)] menu, select [New Screen (N)] or click . The [New Screen] dialog box appears. Select the [Screens of Type], specify the screen number and [Title] then click [New].

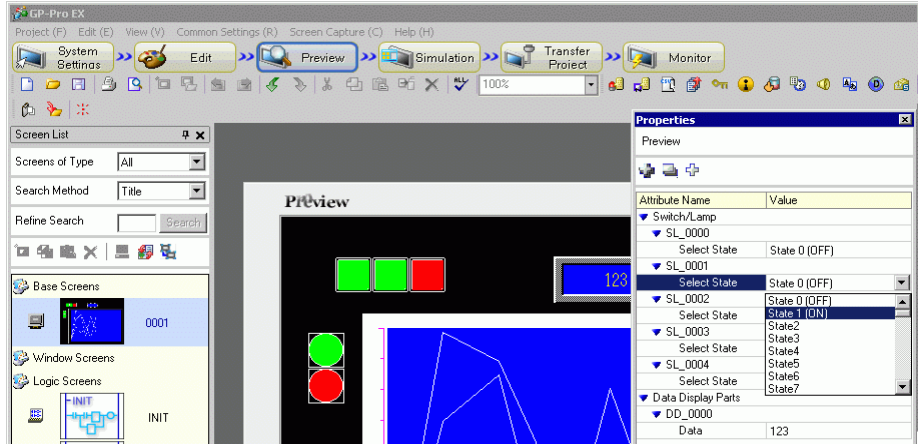


12 [Base 2] appears.




NOTE

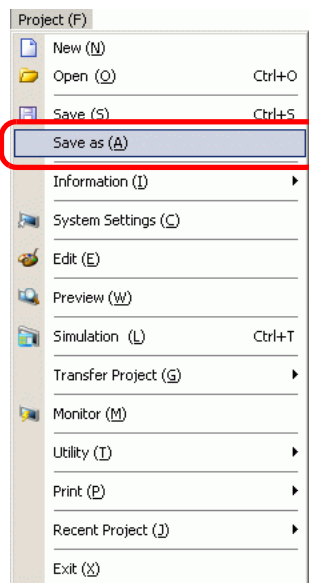
- You can check the display state of the screen, even during drawing mode, by clicking the [Preview] icon  on the State toolbar (colors display by using the display unit's color settings). You can preview the Base and Window screens only. From the [View (V)] menu, point to [Workspace (W)] and select [Properties (P)] to check simple operations (for example, show or hide Window parts, change the state of Switch Lamps, and display values in Data Displays). You can save the displayed preview screen to a JPEG file by



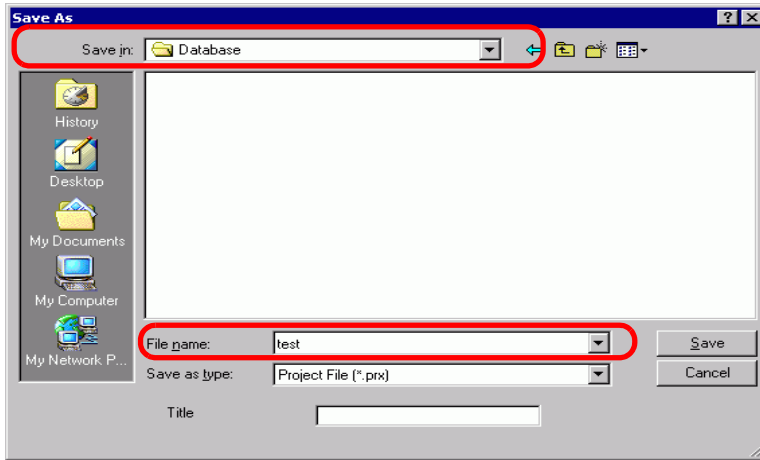
selecting [Export to File (F)] from the [Screen Capture (C)] menu.

After confirming the display, click the [Edit] icon  on the State toolbar to return to the screen editor.

13 From the [Project (F)] menu, select [Save As (A)].

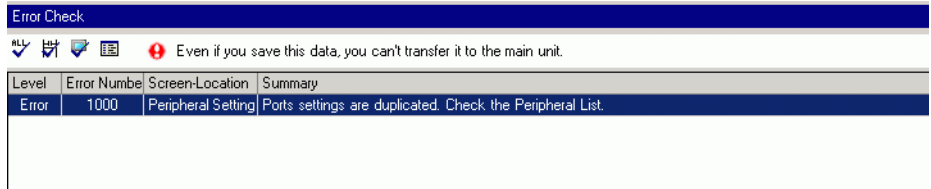


14 The [Save As] dialog box appears. Define the storage location and file name and click [Save].




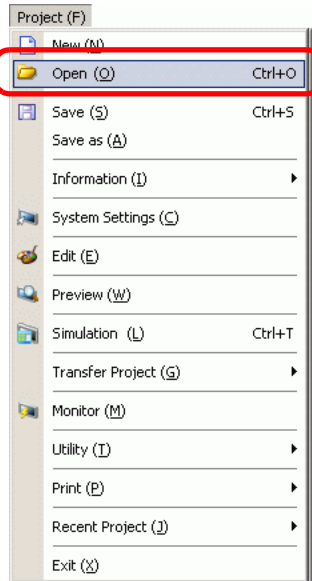
NOTE

- Your file name can contain up to 255 characters, including the file extension. The default location is \Program Files\Pro-face\GP-Pro EX\Database.
- The following error message is displayed in the [Error Check] window if there is a problem saving the file.
 ☞ "33.9 Checking Errors" (page 33-55)



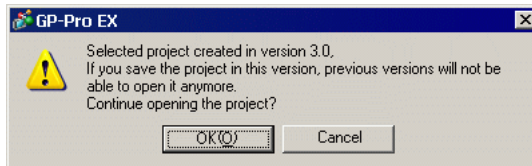
■ Modifying

15 From the [Project (F)] menu, select [Open (O)] or click the Open icon .



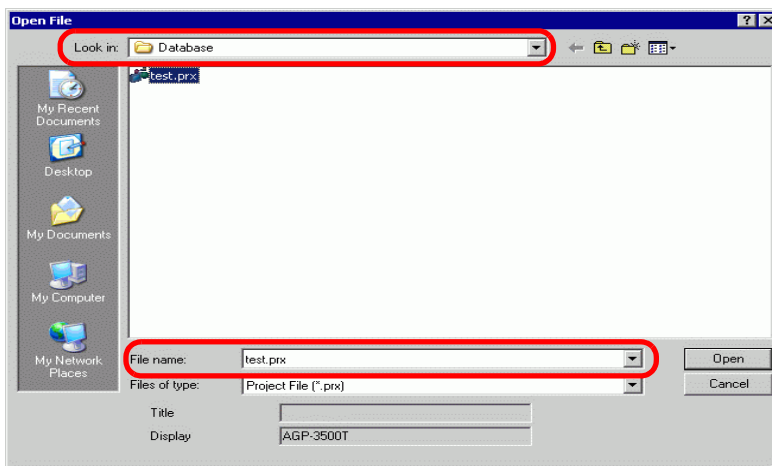
NOTE

- If you attempt to open a project file from a previous version, the following warning message appears.

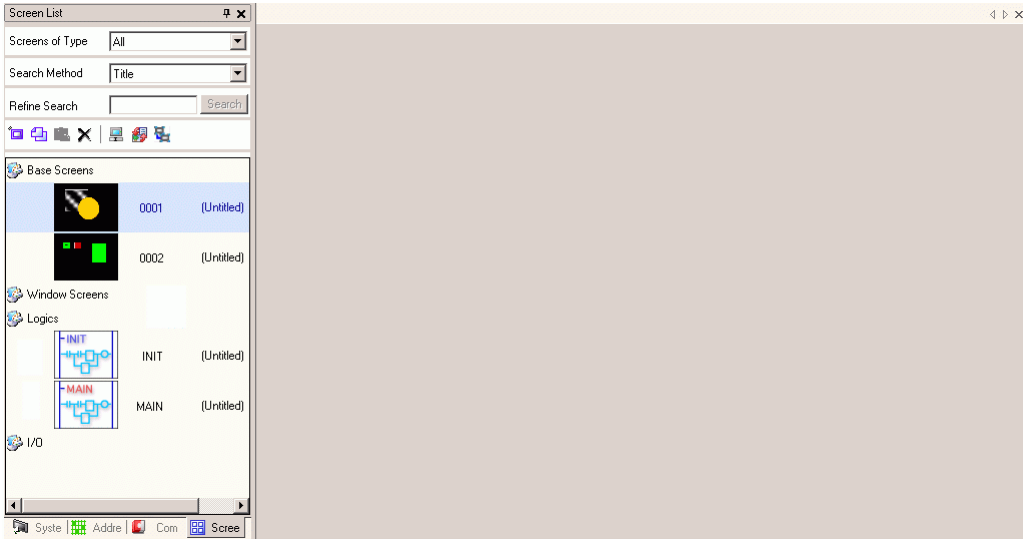


- Project files copied or transferred to CD-ROM will open as read-only. When saved, the [Save as] dialog box appears, where you can change the file name.

16 In the [Open File] dialog box, specify the project file (*.prx), then click [Open].



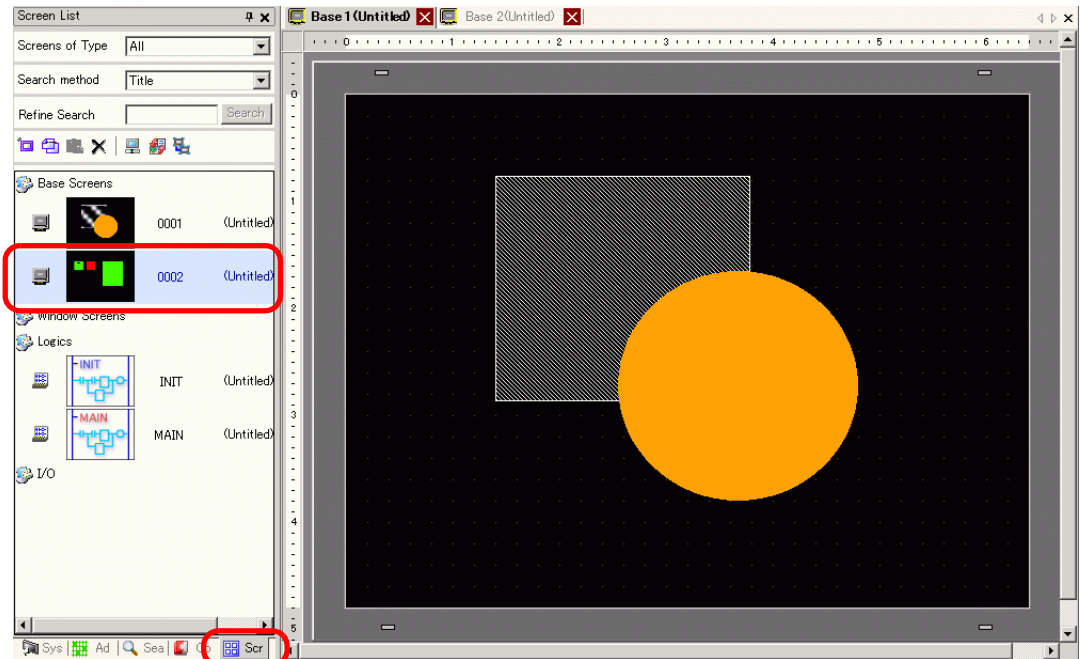
17 The project's main window opens.



NOTE

- You can also open a project file by directly double-clicking the project file (*.prx).
- You can open two different project files at the same time.

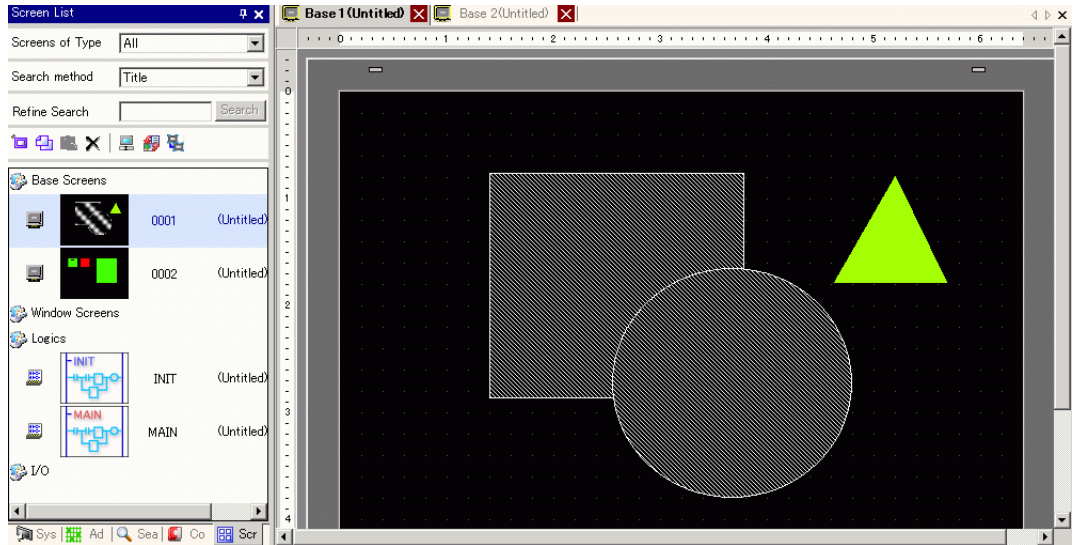
18 From the [Screen List] window, select the Base Screen you want to modify. The screen appears in the editing area.



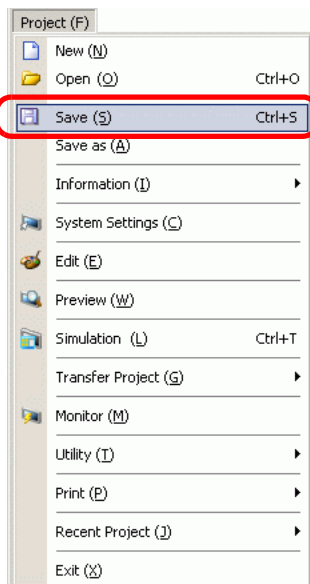
NOTE

- From the [Screen List] window, select the logic screen you want to modify. The screen appears in the editing area.


19 Modify the screen.

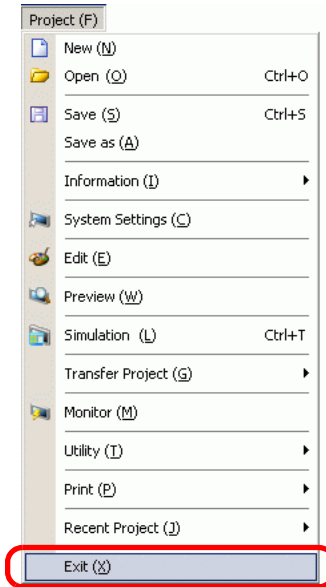


20 To save the changes, from the [Project (F)] menu, select [Save (S)] or click the Save icon




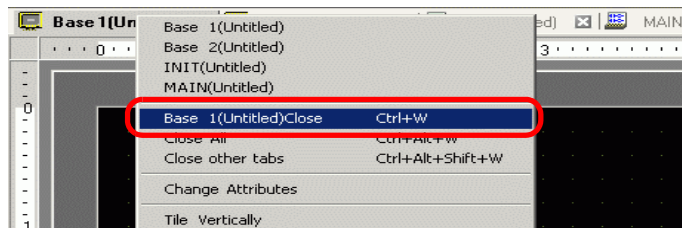
■ Finishing

- 21 To close the project, from the [Project (F)] menu, select [Exit (X)] or click the  icon in the top right corner.



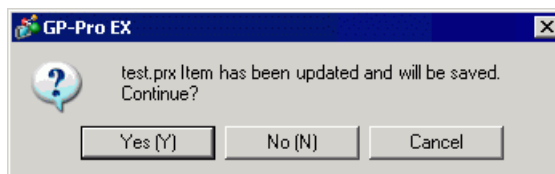
NOTE

- To close a screen, click  on the right-side of the screen tab, or right-click the tab and from the menu select [Close (Screen Number)]. You can also close it with the shortcut key.



The tab display is saved when you close the project. The next time you open the project, the tab display will be the same as when you exited.

- 22 If you change a project file and try to exit the application without saving it, the [Confirm Project File Save] dialog box appears.



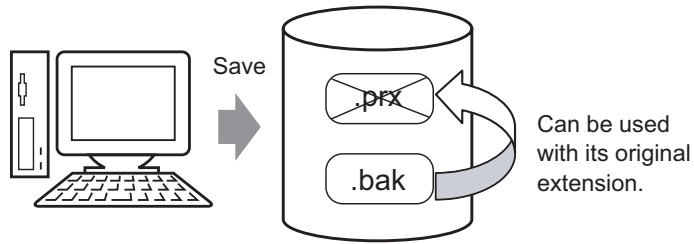
If you click [Yes (Y)], the project is saved in the current state and closed.

If you click [No (N)], the project closes with the last saved information.

If you click [Cancel], the project returns to the state before the operation without being closed.

5.3 Backing Up a Project File

5.3.1 Introduction



To protect against data loss, you can create a backup file (*.bak) for your project. You can use it to revert to the previous version. To recover a project file, change the backup file extension to ".prx".

NOTE

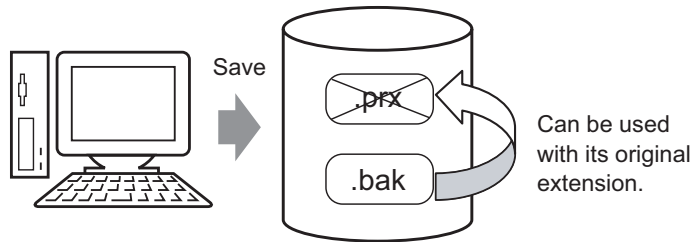
- When abnormal termination occurs in a project, the project file (*.prx) is automatically copied in the "backup" folder, which prevents data loss.
-

5.3.2 Setup Procedure

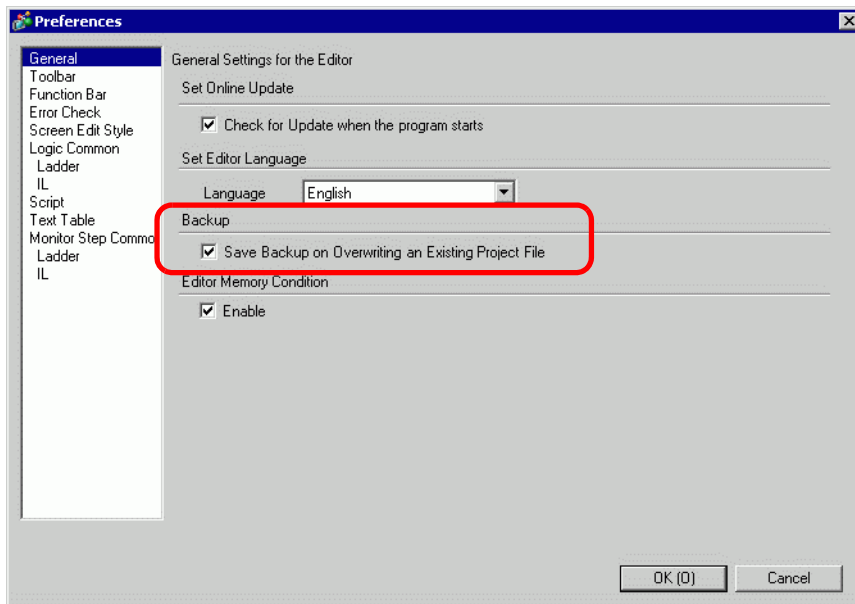
■ Backup as a History Procedure

NOTE

- Please refer to the Settings Guide for details.
 ☞ "5.17.7 [Preferences] Settings Guide ■ General" (page 5-187)



- 1 From the [View (V)] menu, select [Preferences (O)]. The [Preferences] dialog box appears. Select the [Save Backup on Overwriting an Existing Project File] check box.

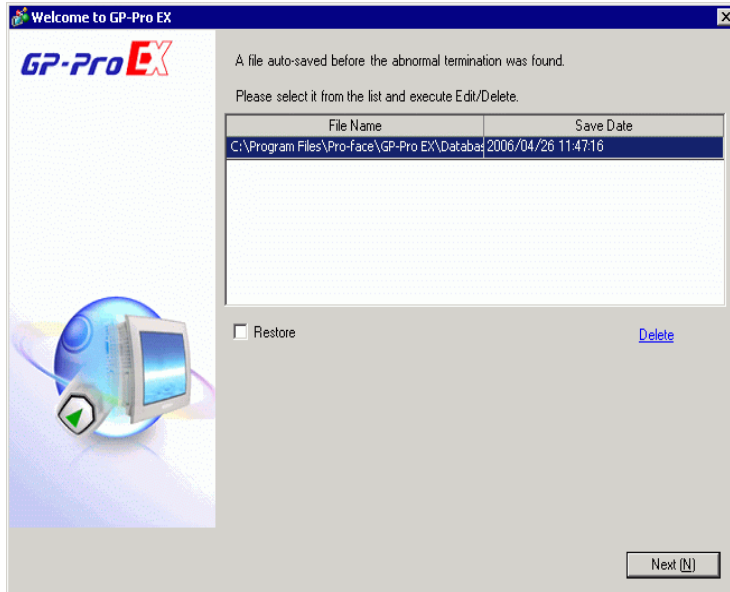


NOTE

- A backup file is saved as "Original Project File Name.bak".
- A backup file is saved in the same location where the original file exists.

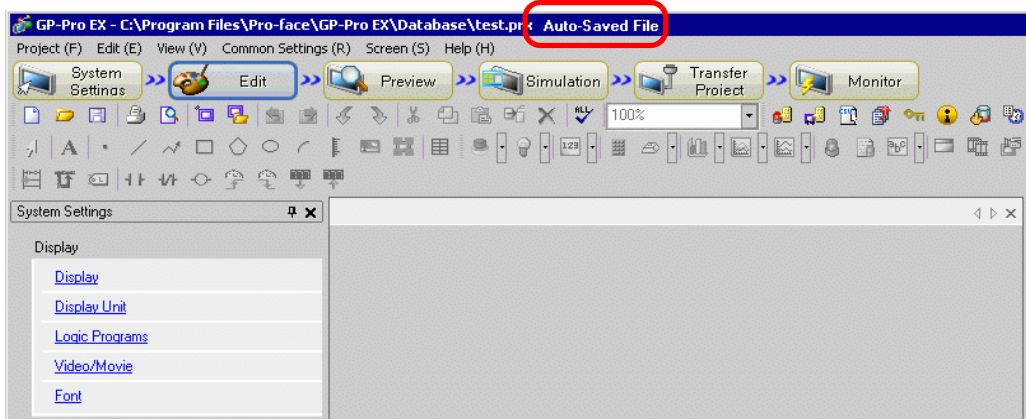
■ Backup on Abnormal Termination and File Startup

When the program closes improperly, a backup file is created in the "backup" folder. When you reopen GP-Pro EX, the following dialog box appears.



◆ What to do if the program closes improperly

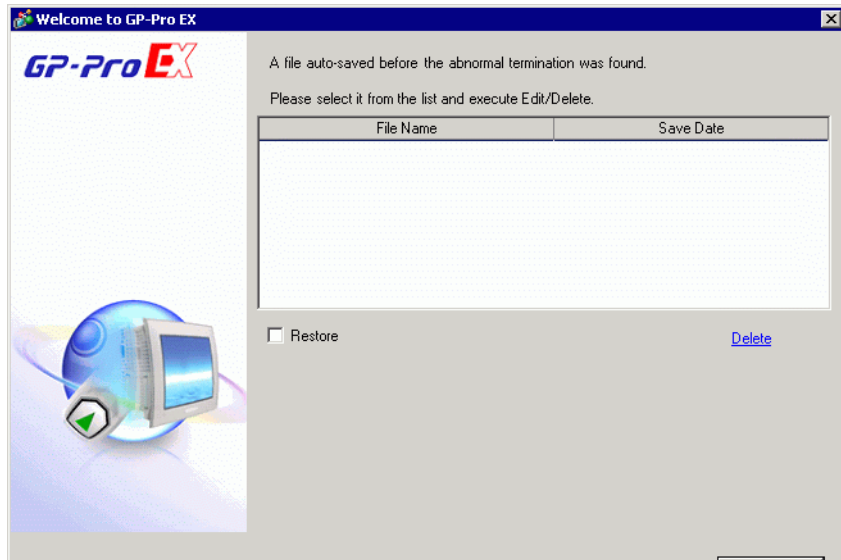
- 1 Select the file you want to fix. Select the [Restore] check box and click [Next].
- 2 The file is fixed and opened as an "Auto-Saved file". After startup, files in the backup folder are automatically deleted.



- 3 From the [Project (F)] menu select [Save as (A)] to save the file in the defined location and with the defined file name.

◆ Starting GP-Pro EX without Fixing the Project File

- 1 Select the file that does not need to be fixed and click [Delete]. The file automatically saved in the "backup" folder is deleted.



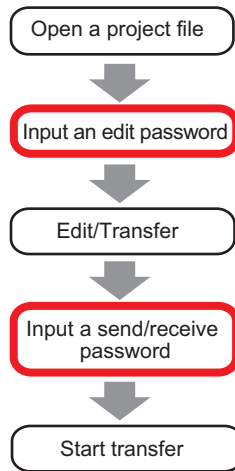
- 2 Click [Next], and start a project file as usual. The project file opens in its most recently saved state.

NOTE

- If you click [Next] without deleting and start GP- Pro EX normally, the next time you start GP-Pro EX the dialog box will appear again.
-

5.4 Entering a Password in a Project File

5.4.1 Introduction



You can protect a project file by setting a password for the file editing or transfer. When you edit or transfer a project file, a dialog box that confirms the password appears. If you enter a password and it is confirmed, you can edit or transfer the project file.

NOTE

- Be sure to remember your password in order to edit/transfer a project file.
 - For information on setting a transmission password, see:
☞ "33.6 Transferring with Passwords" (page 33-32)
-

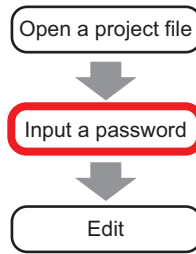
5.4.2 Setup Procedure

NOTE

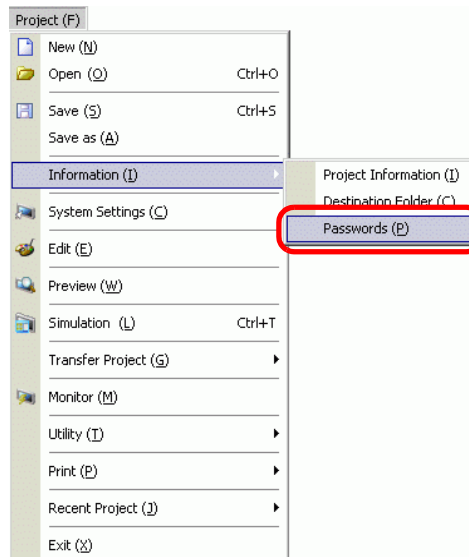
- Please refer to the Settings Guide for details.
 ☞ "5.17.3 [Properties] Settings Guide ◆ Password" (page 5-109)

■ Settings for an Edit Project File Password

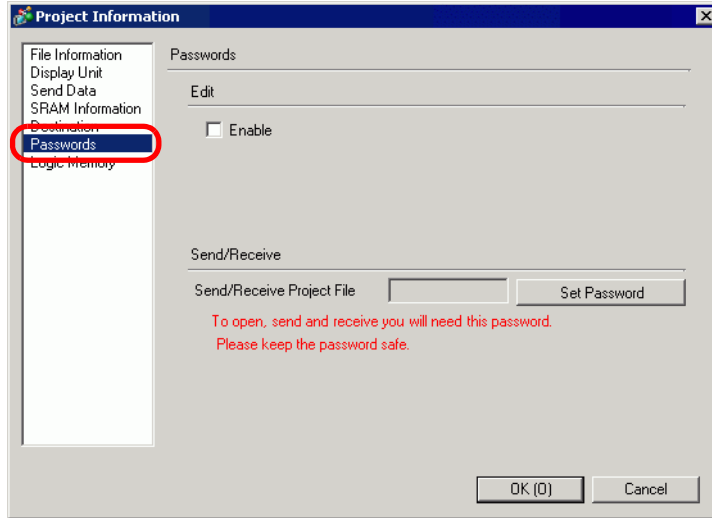
When you open a project file, a dialog box to input a password appears.



1 From the [Project (F)] menu, point to [Information (I)] and select [Passwords (P)].



2 The [Project Information] dialog box displays with the [Passwords] settings.



3 In the [Edit] area, select the [Enable] check box to display the following dialog box.

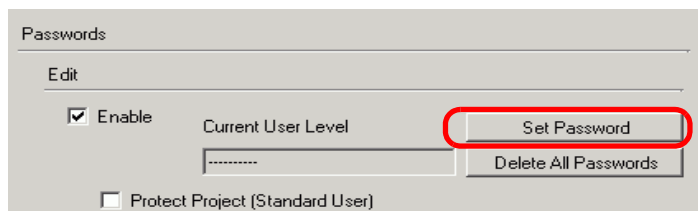


4 Enter a password. The password can be up to 10 single-byte characters. Confirm the password.

NOTE

- To enable setting up passwords, you need to define the [Super User Password].

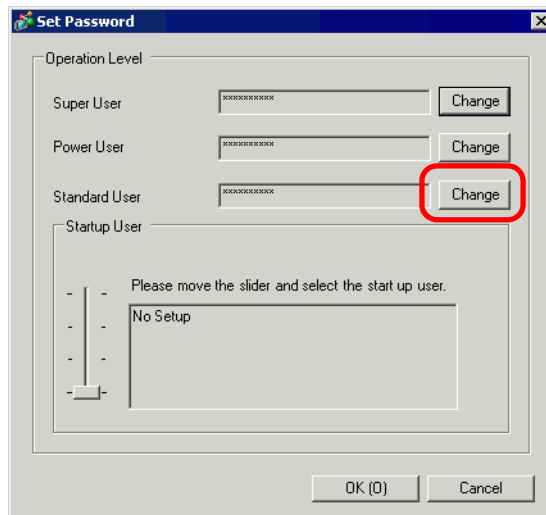
5 Click [OK] to return to the [Project Information] dialog box. [Password Settings] is enabled and you can define passwords for each level of users.



- 6 Click [Set Password] to display the following dialog box.
Enter the super user password previously defined, and click [OK].



- 7 For the [Standard User] click [Change].



- 8 Enter a password. The password can be up to 10 single-byte characters. Confirm the password, then click [OK].



- 9 Click [OK] to close the [Set Password] dialog box. In the [Project Information] dialog box, select the [Protect Project] check box to protect the project with a password against unauthorized access.



- 10 Click [OK] to complete the password settings.

NOTE

- When opening a password-protected project, the [Release Protection] dialog box appears. When you enter a valid password and click [OK], the protection will be released and you can edit the project.

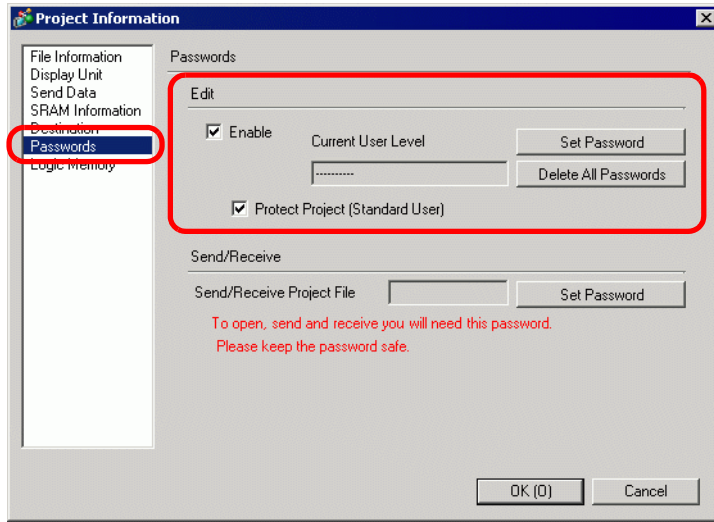


- To change the project protection level, in the [Set Password] dialog box select the user level with the [Startup User] setting. In the [Project Information] dialog box, with the [Protect Project] check box selected, the defined user level becomes the standard user level for editing the project.
-

■ Changing the Project Password

Use the [Project Information] dialog box to change or delete project passwords.

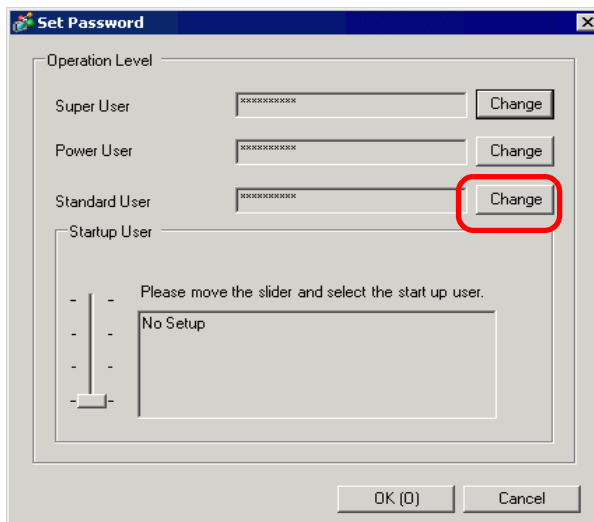
- 1 From the [Project (F)] menu, point to [Information (I)] and select [Password (P)].
The [Project Information] dialog box appears.



- 2 In the Edit section, click [Set Password]. In the dialog box that follows, enter the Super User password and click [OK].



- 3 Click the [Change] button for user levels whose passwords you want to change.



- 4 Enter a password. The password can be up to 10 single-byte characters. Confirm the password, then click [OK].

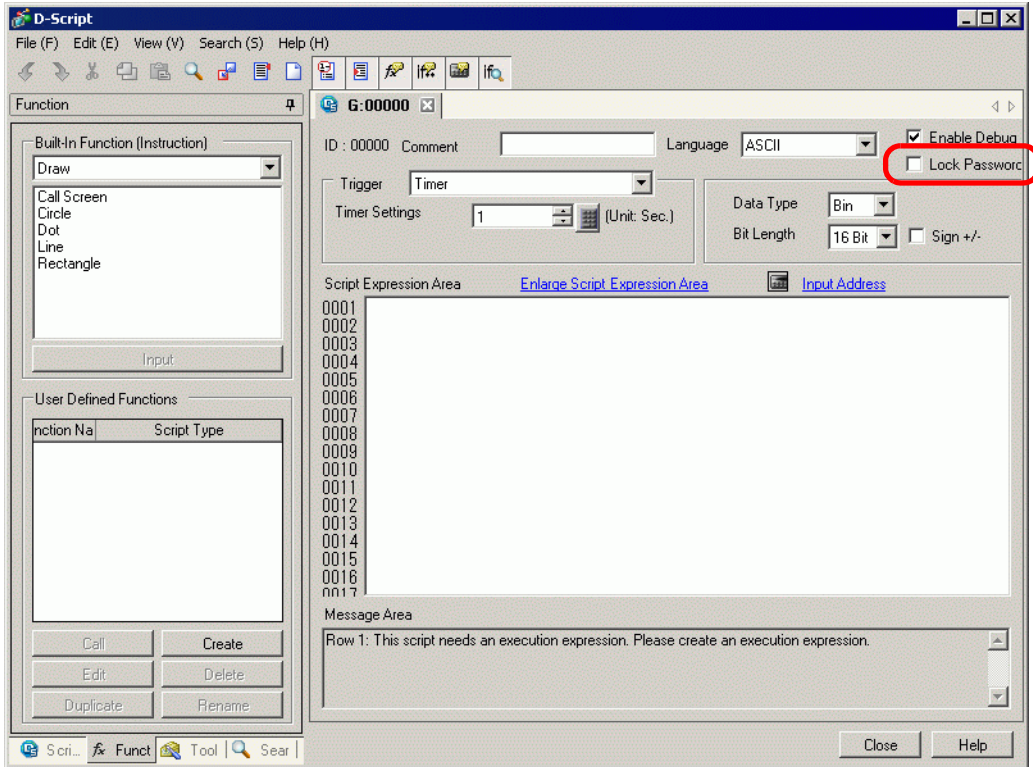


■ Lock Password Settings

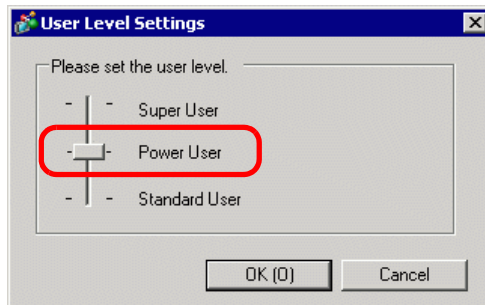
When a password is set, you can set lock the passwords for the script, created screen, and the grouped parts. To edit a part or data where a password lock is set, or to cancel a password lock, you will need to input the set user level password.

■ Script (D-Script, Global D-Script)

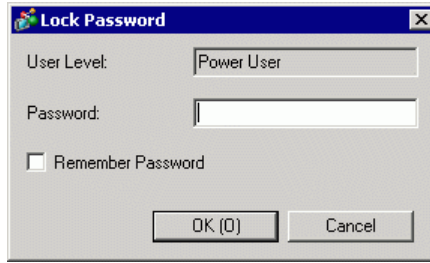
1 Open the D-Script or Global D-Script editor and select the [Lock Password] check box.



2 In the dialog box that follows, move the slider to the user level for your password and click [OK].



3 Input the selected user level password.



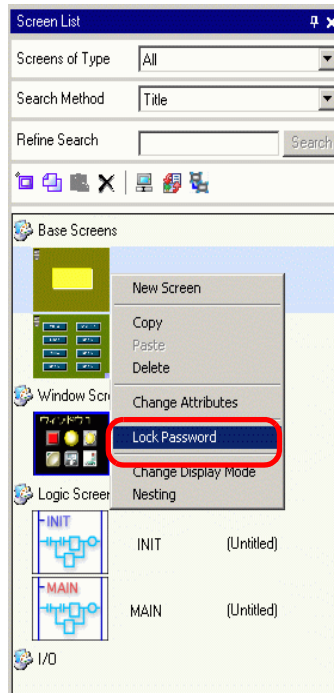
NOTE

- Select the [Remember Password] check box so you do not need to input any more passwords when you operate at the same user level in the project.

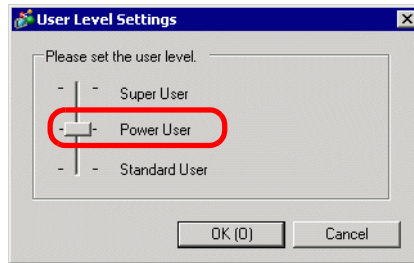
4 Click [OK] to complete setup.

■ Screen (Base Screen, Window Screen, Logic Screen, I/O Screen)

1 In the [Screen List] window, right-click the screen that you want to set with a password, and select [Lock Password].



- 2 In the dialog box that follows, move the slider to the user level for your password and click [OK].



- 3 Input the selected user level password.



NOTE

- Select the [Remember Password] check box so you do not need to input any more passwords when you operate at the same user level in the project.
-

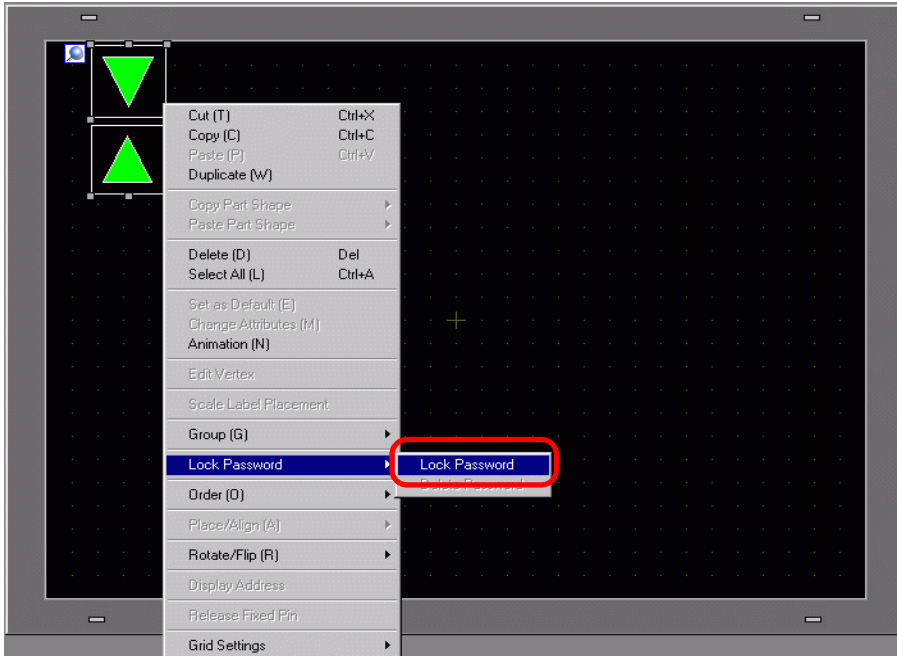
- 4 Click [OK] to complete setup.

NOTE

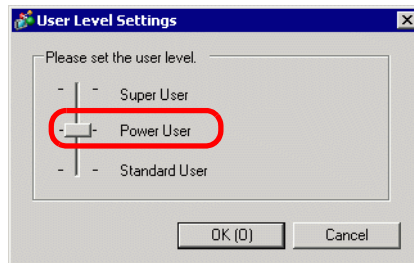
- If you set up user level passwords on individual screens, the [Unlock Password] dialog box displays, where you have to enter the required user level password. If an incorrect password is entered, the screen will display in the screen list, but cannot be edited.
-

■ Grouped Parts

1 Select the grouped parts, point to [Lock Password] and click [Lock Password].



2 In the dialog box that follows, move the slider to the user level for your password and click [OK].



3 Input the selected user level password.



NOTE • Select the [Remember Password] check box so you do not need to input any more passwords when you operate at the same user level in the project.

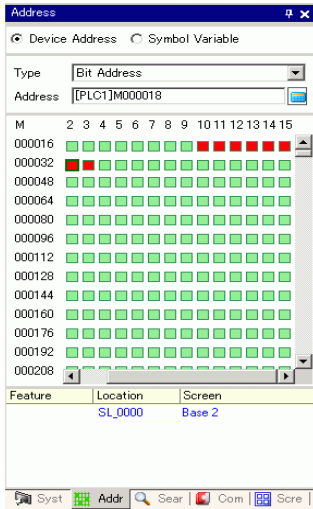
4 Click [OK] to complete setup.

5.5 Confirming the Address List Used in a Project File

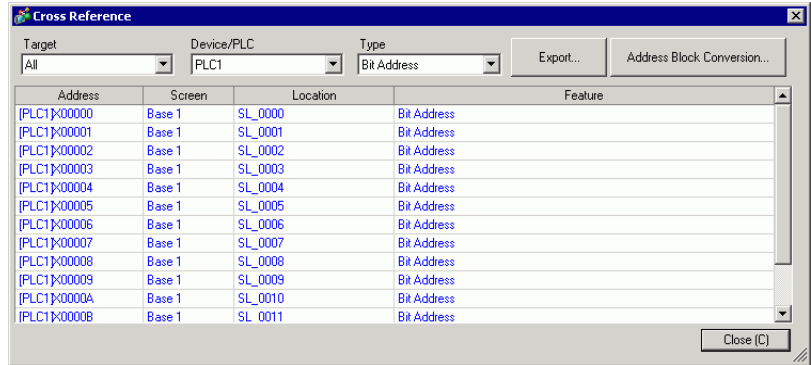
5.5.1 Introduction

You can check the addresses specified in a project file in the two following ways.

Map Format



List Format



5.5.2 Setup Procedure

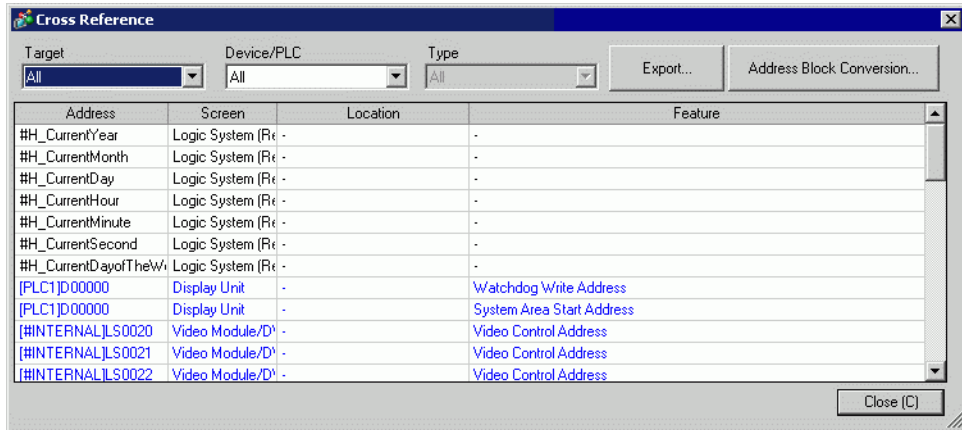
NOTE

- Please refer to the Settings Guide for details.
 ☞ "5.17.4 [Utility] Settings Guide ■ Cross Reference" (page 5-119)

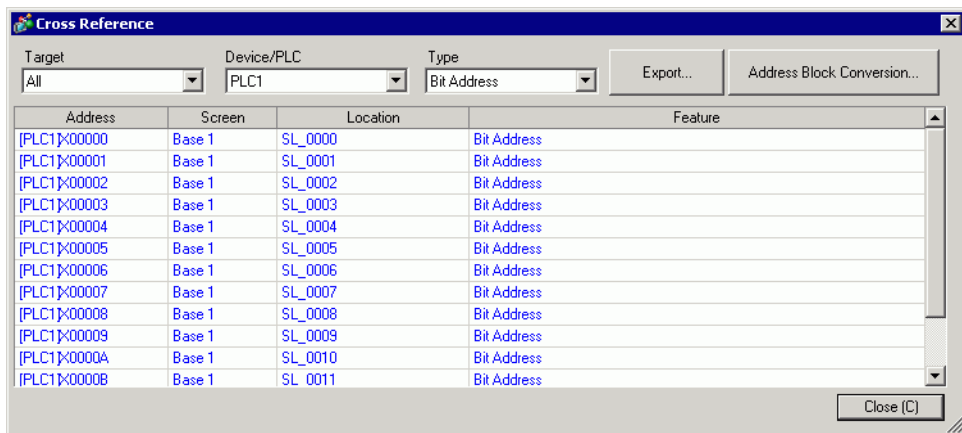
■ Viewing the List of Addresses

Displays a list of the addresses specified in a project file.

- 1 From the [Project (F)] menu, point to [Utility (T)] and select [Cross Reference (R)]. The [Cross Reference] dialog box appears.

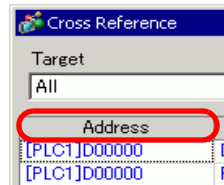


- 2 Select the screen or setting to be displayed from [Target].
- 3 Select the Device/PLC of the target to be displayed.
- 4 Select the [Type] of the address to be displayed.
- 5 The list of addresses in use is displayed.



NOTE

- To sort by descending or ascending order, click the Addresses header. The column is sorted alphanumerically.

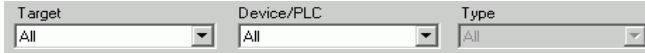


- To convert the listed addresses as a block, click [Address Block Conversion].
☞ "5.6 Converting Multiple Addresses" (page 5-47)
 - If you specify [All] in the Cross Reference [Target] field, the address information may take longer to be displayed.
 - You can open and edit the [Base Screen] and [Window Screen] by double-clicking on the screen name.
-

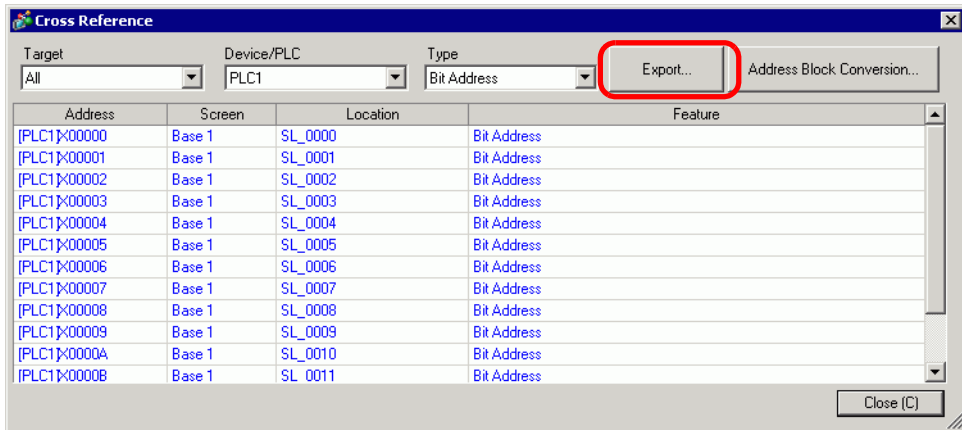
◆ **Export the List of Addresses**

You can save (export) the List of Addresses that display in the Cross Reference in either the CSV format or text format.

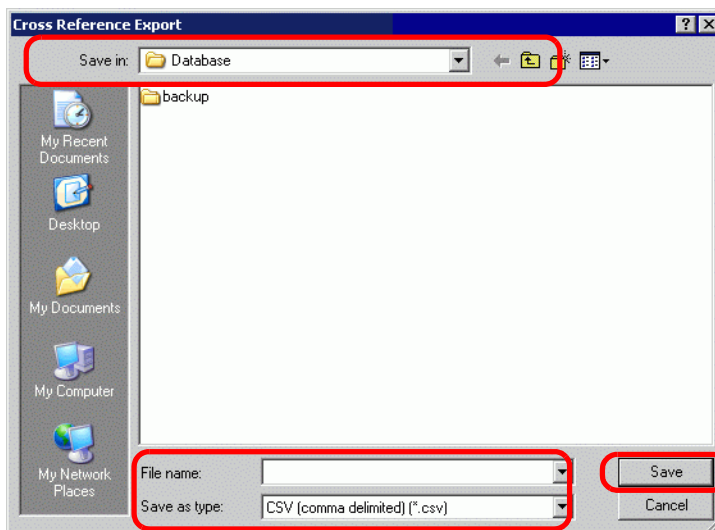
- 1 Display the List of Addresses you want to save (export) to the [Cross Reference] dialog box. Select the screen to display, the settings, the device/PLC and the address type for each one.



- 2 Click [Export].



- 3 Select [Save In (I)] in the following dialog box, set [File Name (N)] and [File Type (T)] and click [Save].



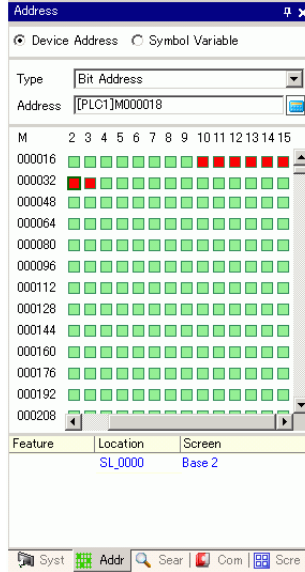
- 4 Check the contents of the settings by opening the file you saved (exported) in the Microsoft Excel application or Notepad.

■ Setting Procedure to View Addresses in the Address Map

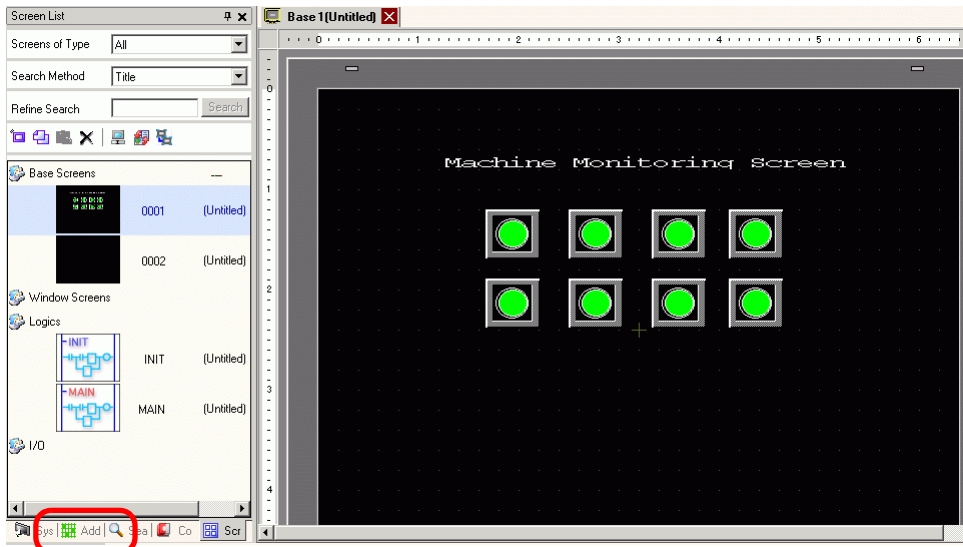
NOTE

- Please refer to the Settings Guide for details.
 ☞ "5.17.5 [Work Space] Settings Guide ■ Address Settings" (page 5-128)

Displays the list of the addresses specified in a project file with a map.



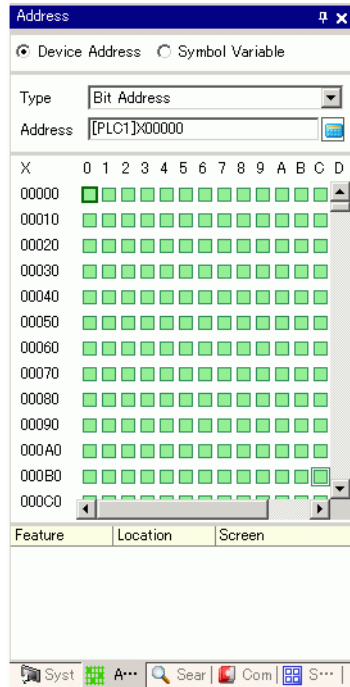
1 Click [Address] in the Work Space.



NOTE

- If the [Address] tab is not displayed in the Work Space, from the [View (V)] menu, point to [Work Space (W)] and select [Address (A)].

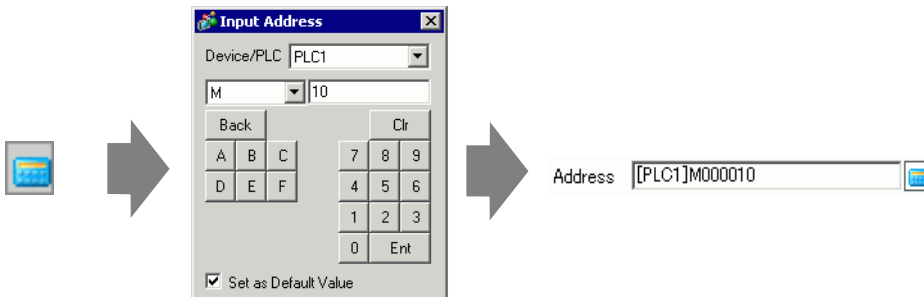
2 The following [Address] dialog box appears.



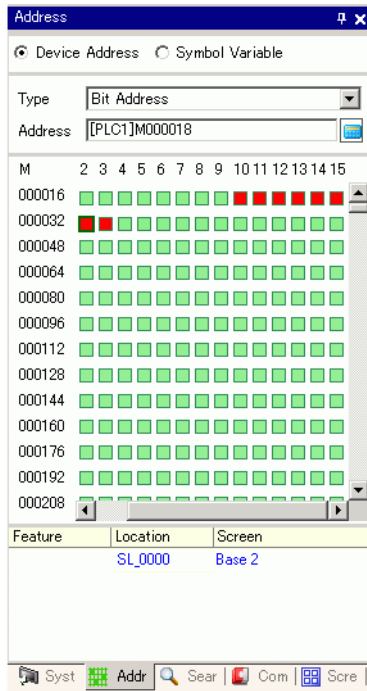
3 Select the target to display from [Device Address] or [Symbol Variable].

4 In the [Type] drop-down list, select the address type from [Bit Address] or [Word Address].

5 Select the address of the target to display. (For example M010)

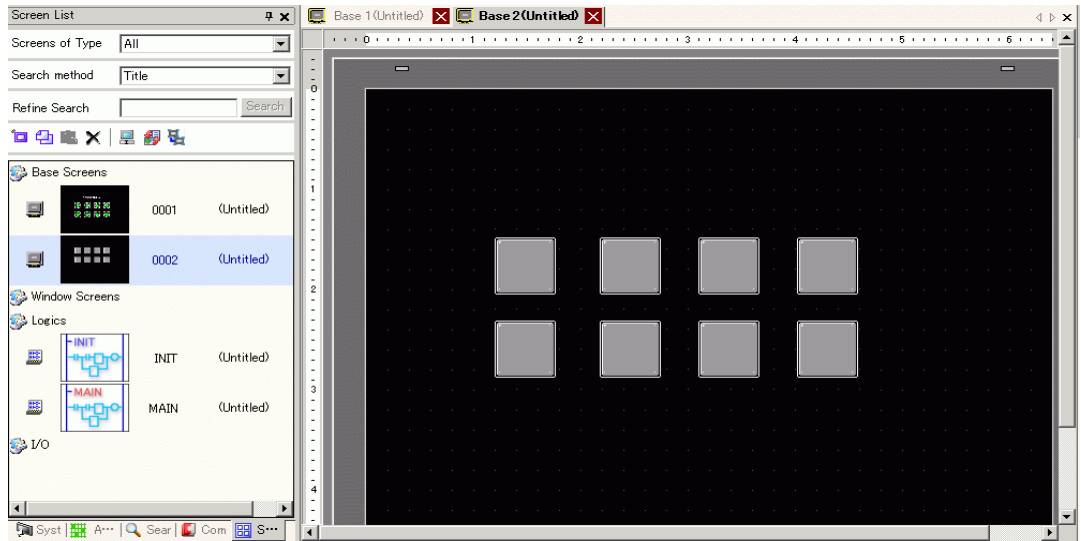


6 You can verify which addresses are used on the address map.

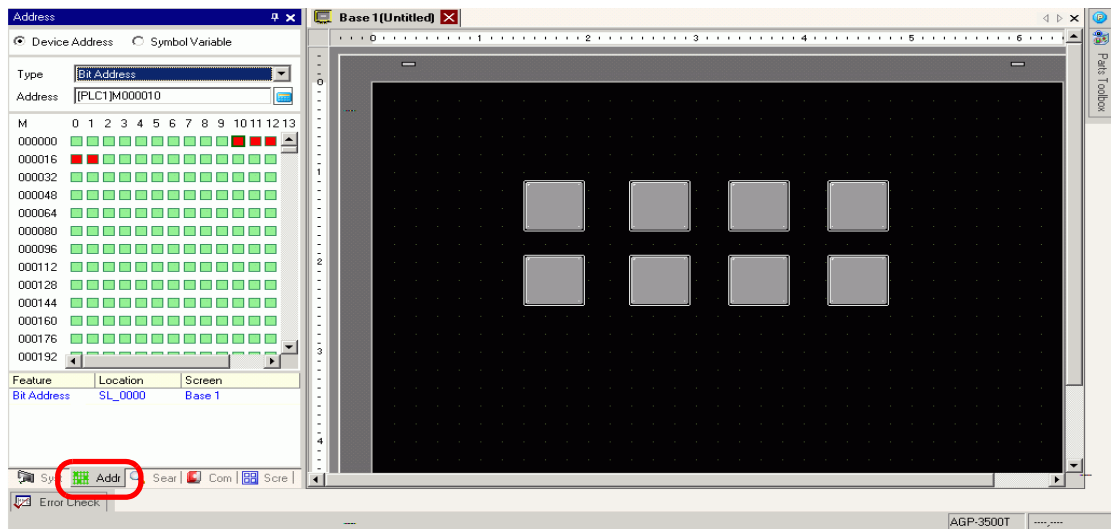


■ Changing Addresses Used in Screen Parts from the Address Map

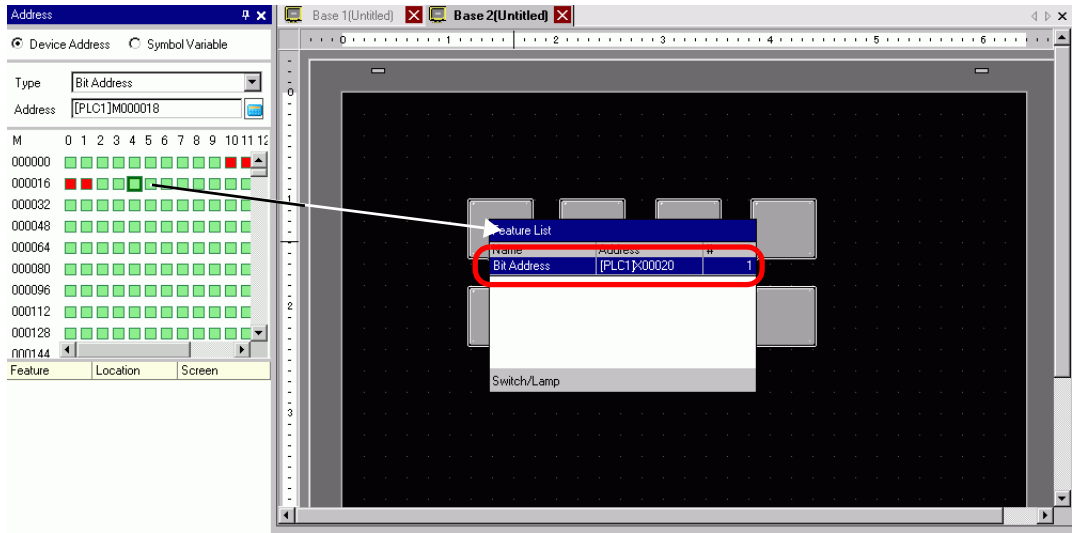
1 Open the screen with the part whose address you want to change.



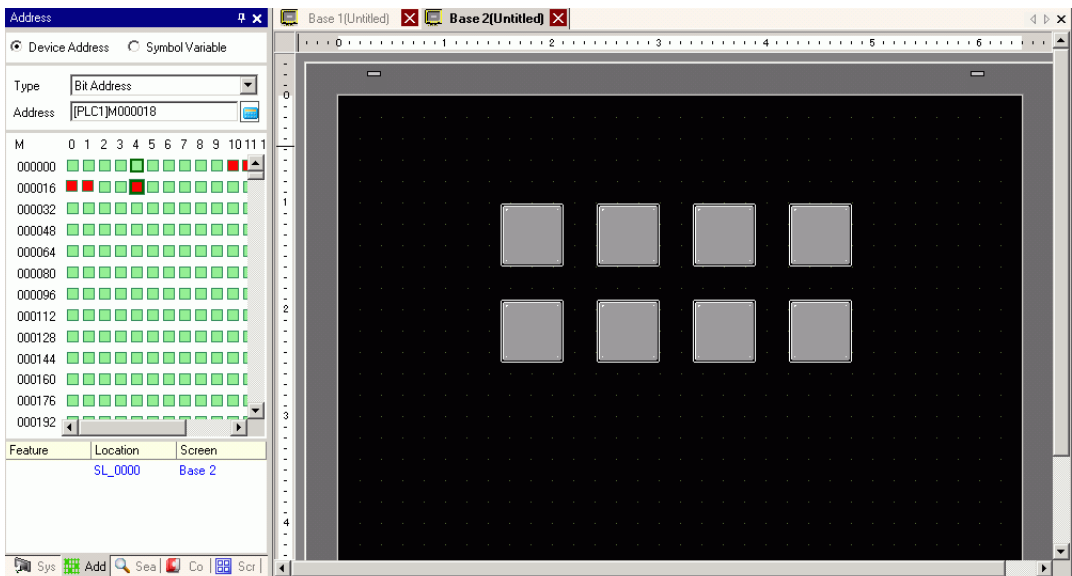
2 Click [Address] in the Work Space. Open the appropriate address [Type].



- 3 Drag an address from the list onto the part in the screen. Do not release the mouse button. The [Feature List] dialog box is displayed.

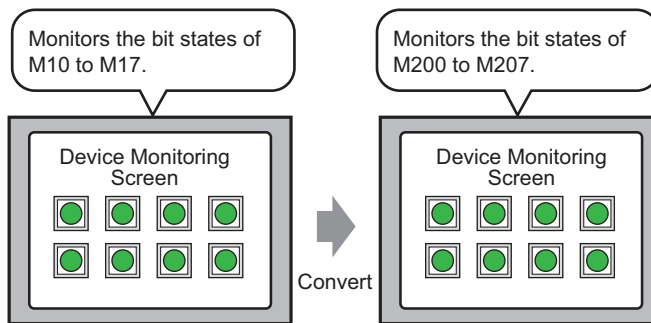


- 4 With the mouse button held down, select the appropriate row in this box. Release the mouse button.



5.6 Converting Multiple Addresses

5.6.1 Introduction



You can convert addresses by specifying the start/end addresses before conversion and the start address after conversion.

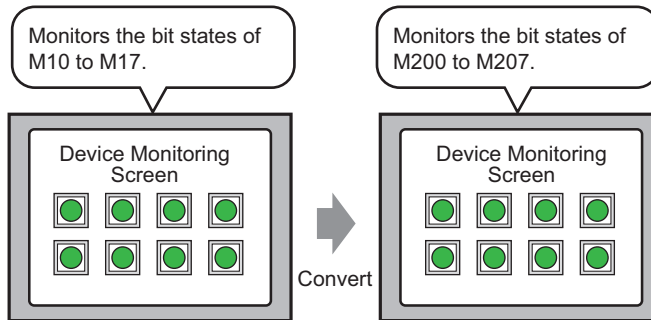
You can convert multiple addresses at one time using two conversion methods. Use [Whole Project] to convert all the addresses in a project. Use [Individual Settings] to convert addresses on a target screen.

5.6.2 Setup Procedure

NOTE

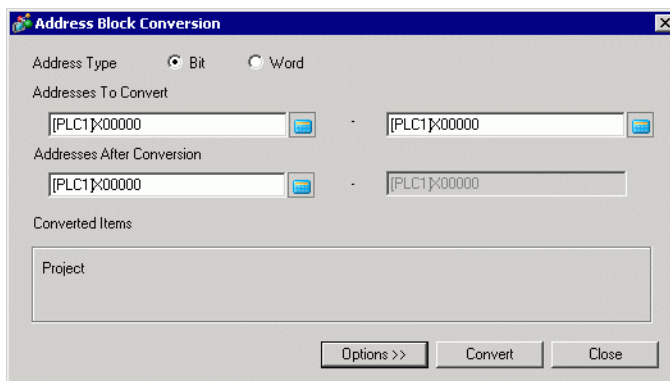
- Please refer to the Settings Guide for details.
 ☞ "5.17.4 [Utility] Settings Guide ■ Address Block Conversion" (page 5-116)

Converts the addresses set on the specified screens as a block.

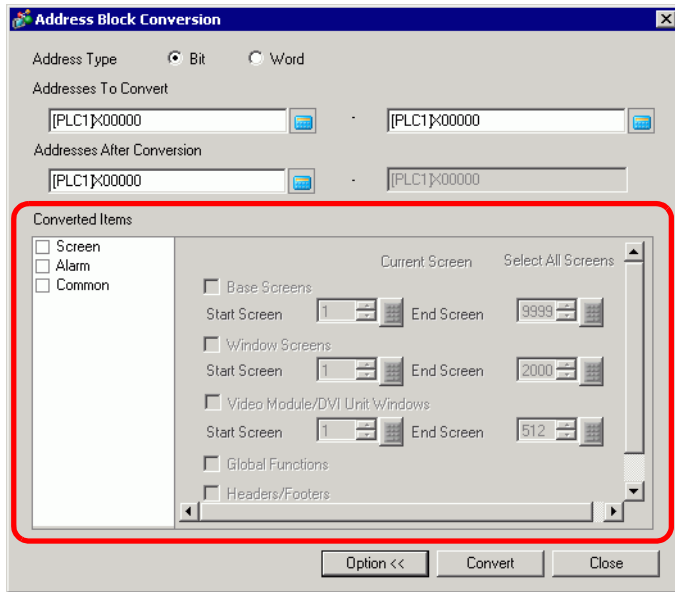


You can convert addresses by specifying the start/end addresses before conversion and the start address after conversion.

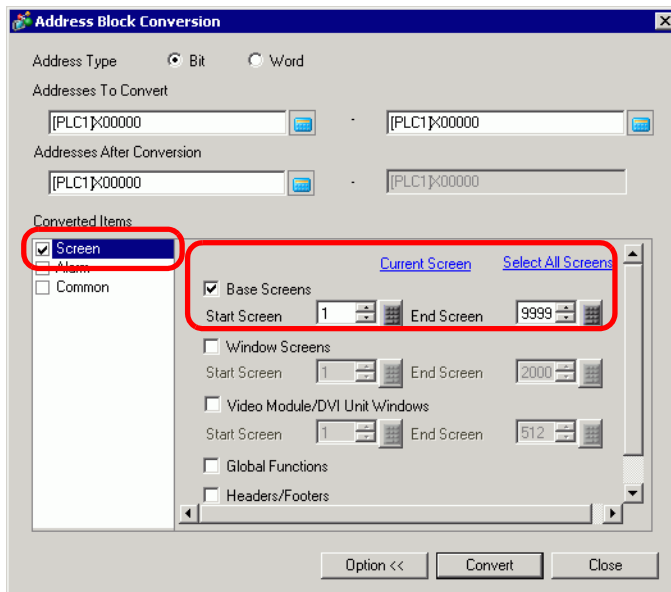
- 1 From the [Project (F)] menu, point to [Utility (T)] and select [Convert Addresses (A)]. The [Address Block Conversion] dialog box appears.



2 Click [Individual Settings] to display the setting items for each target to be converted.



3 In the [Converted Items] area select [Screen] check box, then select the screen types and screen numbers.



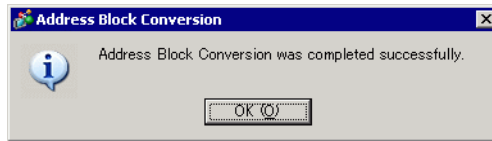
4 Select the [Address Type] from [Bit] or [Word]. (For example, bit)

5 In the [Address to Convert] area, define the start address (for example, M10) and end address (for example, M17).

NOTE

- In the [Address to Convert] fields, you cannot define different registers for the start and end addresses.

- 6 In the [Address After Conversion] area, define the first address after conversion (for example, M200).
- 7 Click [Convert]. When the completion message appears, click [OK].

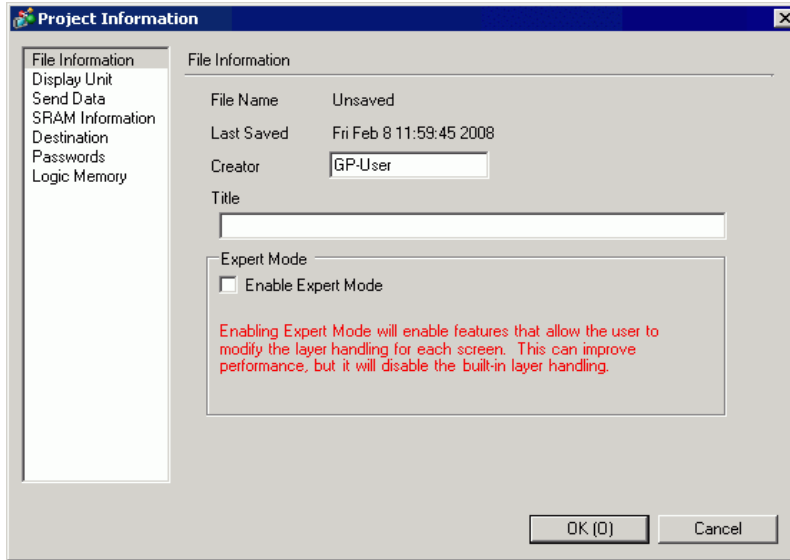


NOTE

- If you selected [Symbol Variable] for the addresses, the [Address Block Conversion] will not work properly.
 - If the total number of addresses (End Address - Start Address) before conversion is greater than the total number of addresses (End Address - Start Address) after conversion, the last device address is assigned to remaining addresses.
-

5.7 Viewing the Project Information

5.7.1 Introduction



From the [Project Information] dialog box, you can view: File Creator and Last Saved Date; the Model and Device/PLC; the data sent by Project Transfer; backup SRAM usage; the logic program you are creating; the registered variable size, and so on. You can also specify a destination folder and a password.

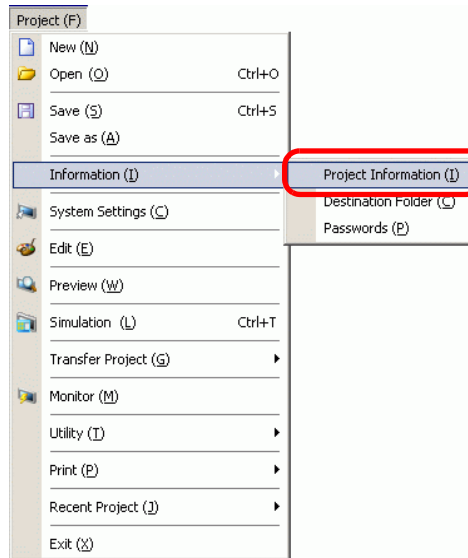
5.7.2 Setup Procedure

NOTE

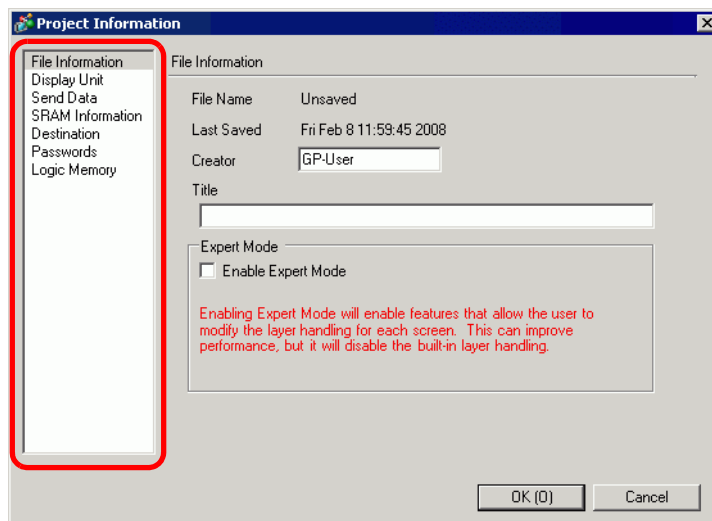
- Please refer to the Settings Guide for details.
 ☞ "5.17.3 [Properties] Settings Guide ■ Project Information" (page 5-104)

■ Checking [Project Information]

1 From the [Project (F)] menu, point to [Information (I)] and select [Project Information (I)].



2 The [Project Information] dialog box appears. If you click each item in the left window, the displayed information changes.

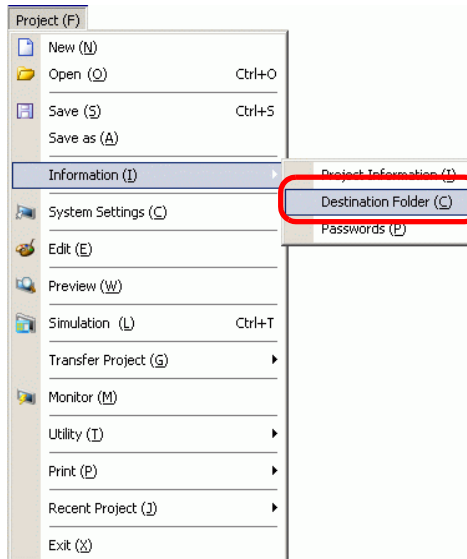


3 Change any information as necessary and click [OK] to close the [Project Information] dialog box.

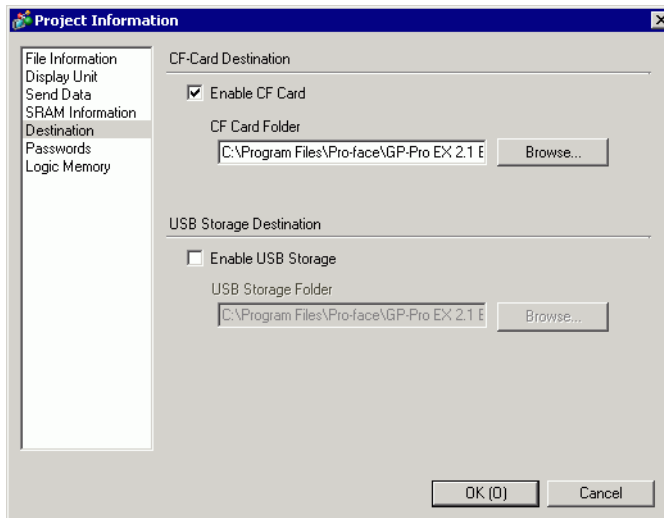
■ Setting the Destination Folder

Specifies the location to temporarily store data before saving it on a CF Card or USB storage device.

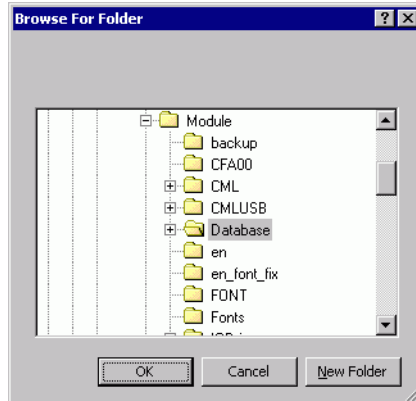
- 1 From the [Project (F)] menu, point to [Information (I)] and select [Destination Folder (C)].



- 2 The [Project Information] dialog box appears. Select [Destination] and the check box beside either [Enable CF Card] or [Enable USB Storage].



3 Click [Browse...] and designate the folder.

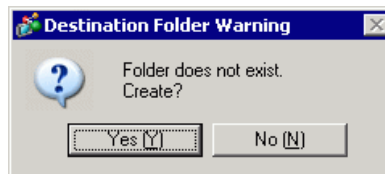


NOTE

- In the initial settings, \Program Files\Pro-face\GP-Pro EX *.* (*.* shows the version) \Database\ (folder with the same name as the project file) is automatically selected for the destination folder.

Click [OK] to return to the [Project Information] dialog box.

4 Click [OK]. If you specify the destination folder for the first time, the following message appears to confirm. Click [Yes (Y)].



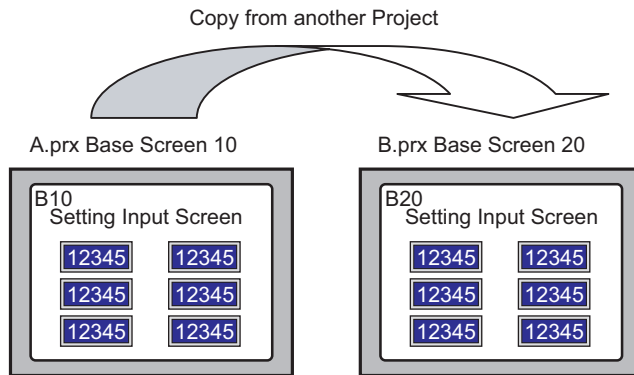
A folder ([data], [file]) is automatically created to store the data to be saved to the CF Card or the USB storage device.

5.8 Copying a Screen from Another Project

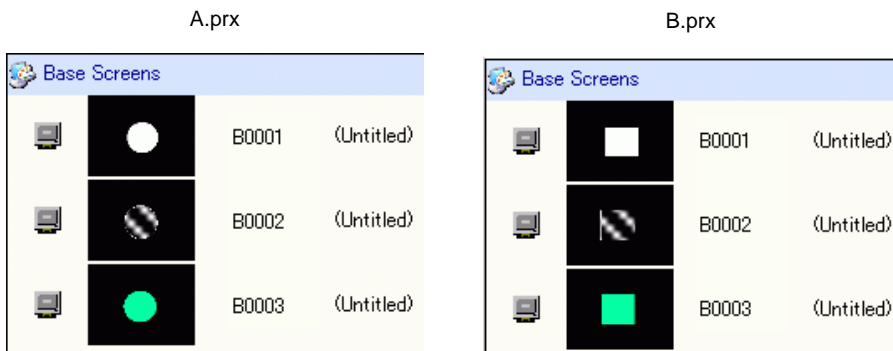
5.8.1 Introduction

You can copy a screen created in another project to the project currently being edited. There are two copying methods: specify necessary screens and copy them, or copy all the screens of another project.

Copying the specified screens in another project



Copying all the screens from another project

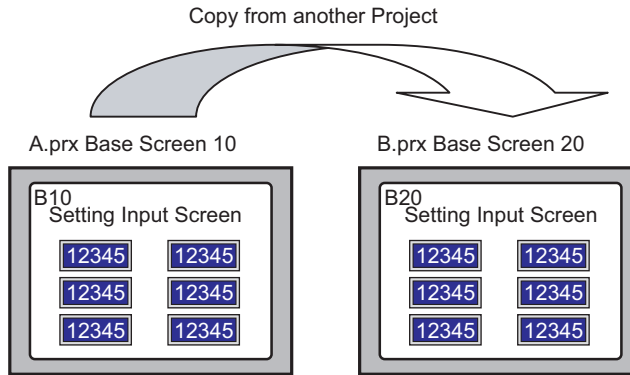


5.8.2 Setup Procedure

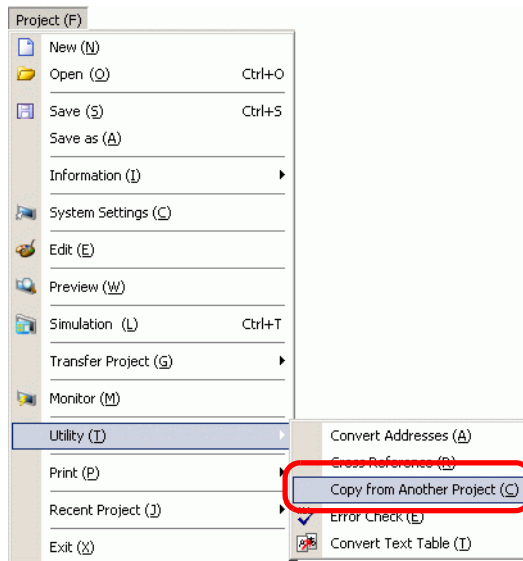
NOTE

- Please refer to the Settings Guide for details.
 ☞ "5.17.4 [Utility] Settings Guide ■ Copy from Another Project" (page 5-120)

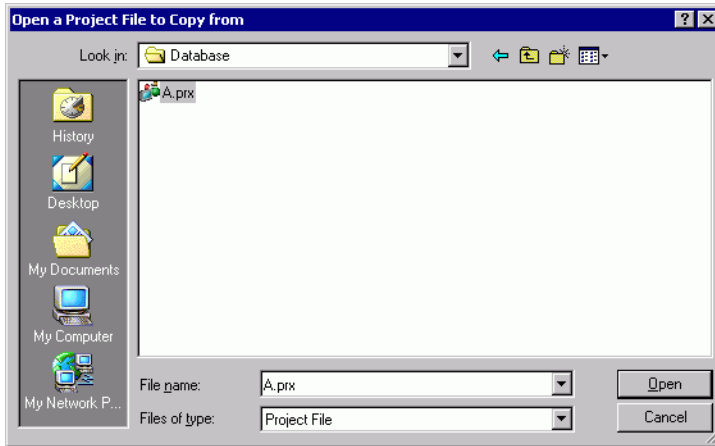
Copy the project "A.prx" Base Screen (for example, 10) to the project "B.prx".



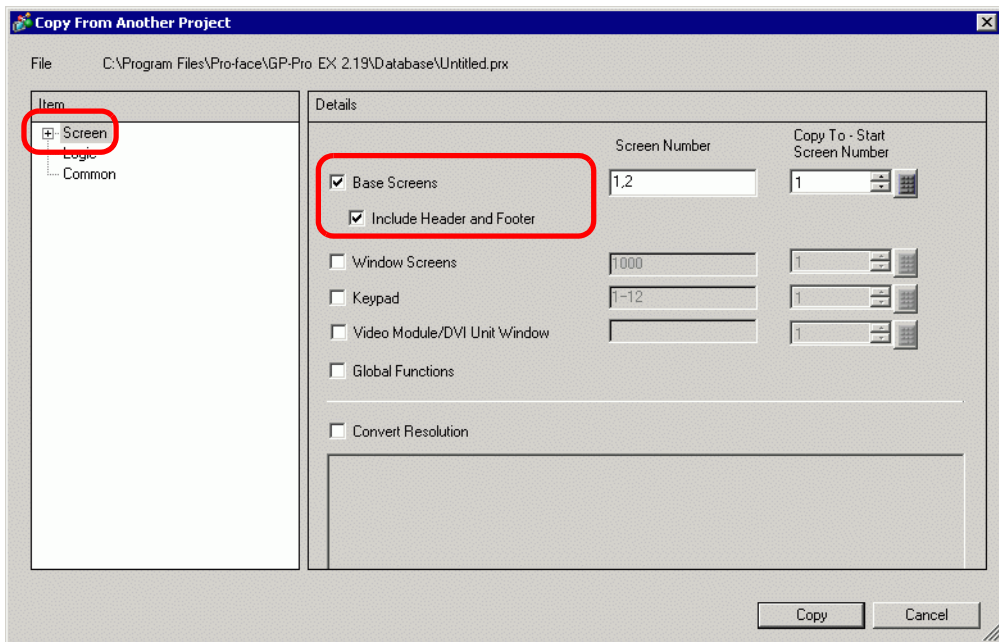
- 1 Open the project into which you want to copy the screens.
- 2 From the [Project (F)] menu, point to [Utility (T)] and select [Copy from Another Project (C)].



- 3 In the dialog box that follows, use the [Look in] and [File name] fields to specify the file, then click [Open].



- 4 The [Copy From Another Project] dialog box will display. In the [Item] area, select [Screen], then select the [Base Screen] and [Include Header and Footer] check boxes only.

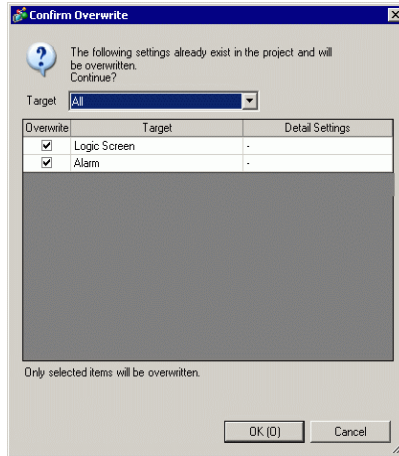


- 5 In the [Base Screens] [Screen Number] field, specify the screens to copy. In the [Copy To] field, specify the first copy destination screen.

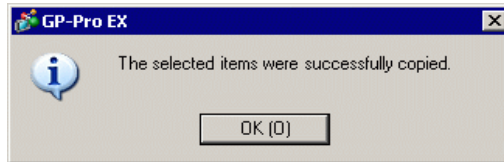
6 Click [Copy].

NOTE

- If a screen of the same number exists in the copy destination, the following confirmation dialog box appears.



7 When the copy is complete, the following message appears. Click [OK].



5.9 Registering Addresses with Comprehensible Names

5.9.1 Introduction

Name each address.

Address	Symbol Name
D100	Line A Production
D101	Line B Production
D102	Line C Production
D103	Line D Production

The diagram illustrates the process of registering addresses with symbol names. On the left, a table lists addresses (D100-D103) and their corresponding symbol names (Line A-D Production). An arrow points from this table to a software interface. The interface shows a 'Monitor Word Address' field with a dropdown menu. The dropdown menu is open, showing a list of symbol names: 'Line A Production', 'Line B Production', 'Line C Production', and 'Line D Production'. The 'Line A Production' option is selected. Below the dropdown menu, the 'Data Type' is set to '16 bit Dec'. A callout box above the interface contains the text: 'You can set addresses with a symbol name.' Below the callout box, a blue box contains the number '12345'.

You can assign names to each address. (This name is called "Symbol"). Parts and other objects can use the symbol name in address fields. You can change the address associated with a symbol when necessary, without affecting address settings in Parts and other objects that use the symbol.

5.9.2 Setup Procedure

NOTE

- Please refer to the Settings Guide for details.
 - ☞ "5.17.5 [Work Space] Settings Guide ■ Address Settings" (page 5-128)
 - ☞ "5.17.8 [Common Settings] Setting Guide ■ Symbol Variable Settings" (page 5-201)
- For the addresses that can be used with logic features, see:
 - ☞ "29.3 Addresses used in the logic program" (page 29-8)

Name each address.

Address	Symbol Name
D100	Line A Production
D101	Line B Production
D102	Line C Production
D103	Line D Production

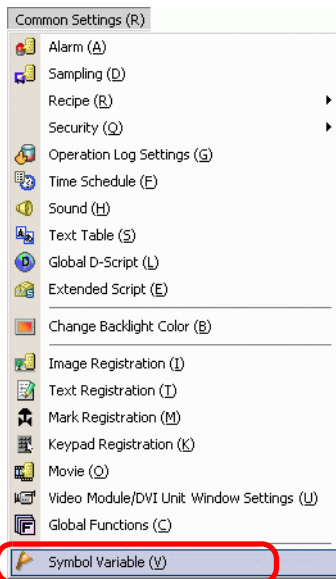
You can set addresses with a symbol name.

Monitor Word Address
 [PLC1]D0000
 Line A Production
 Line B Production
 Line C Production
 Line D Production
 Data Type 16 bit Dec

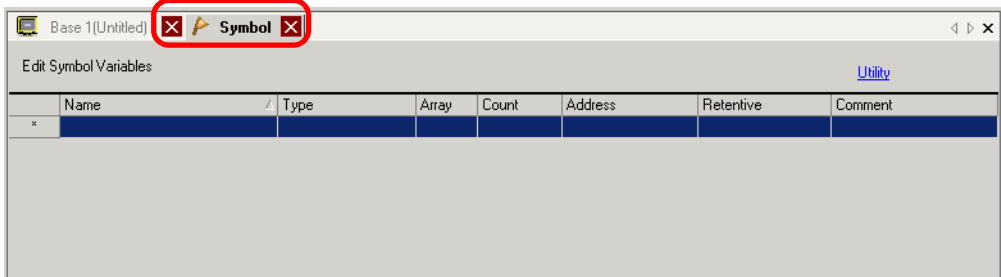
12345

■ Registering the [Symbol Variable]

- 1 From the [Common Settings (R)] menu, select [Symbol Variable (V)].

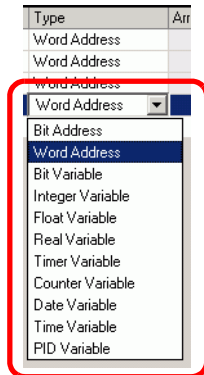


2 The following window appears.



3 Click a cell in the [Name] column and specify the symbol variable name.

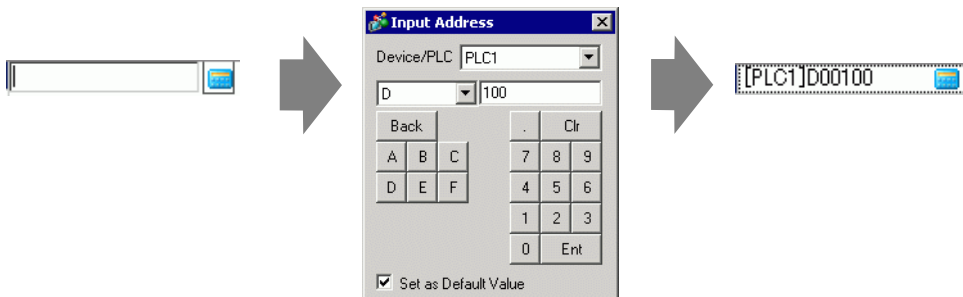
4 For each cell in the [Type] column, select the symbol's address type.



5 Click in each cell in the [Address] column to display . Set each symbol's address. (For example, Line A Production: D100, Line B Production: D101, Line C Production: D102. Line D Production: D103)

Click the icon to display an address input keypad.

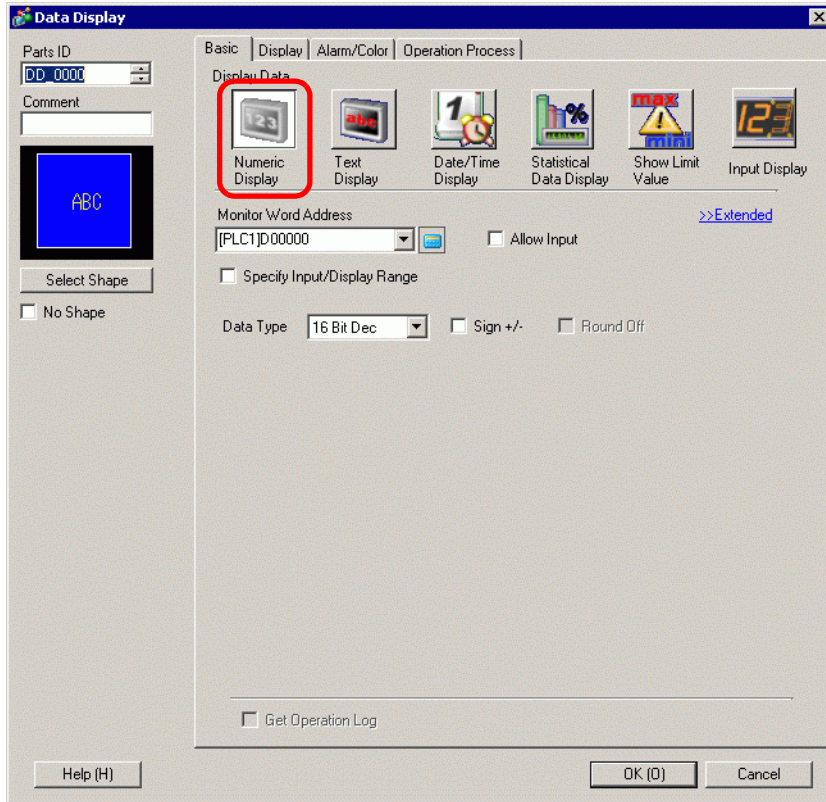
Select device "D", input "100" as the address, and press the Enter key.



6 The settings to register an address as a symbol are complete.

7 Next, set the symbols for your Data Display element. From the [Parts (P)] menu, point to [Data Display (D)] and select [Numeric Display (N)], or click the icon, and place it on the screen.

8 Double-click the placed element. The Data Display dialog box appears.



9 Click [Select Shape] and select the appropriate shape.

10 In the [Monitor Word Address] drop-down list, select the symbol to store the value to display.

11 In the [Data Type] drop-down list, set the type of data to display.

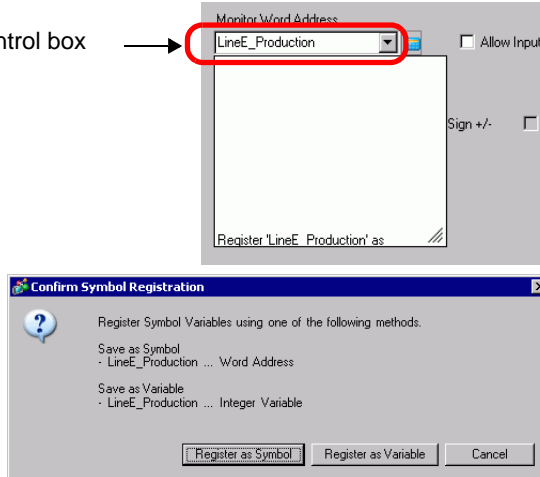
12 As needed, specify the Data Display's color and text on the [Alarm/Color] tab and [Display] tab, and click [OK].

13 Set the Data Displays for the symbols of "Line B Production", "Line C Production", and "Line D Production" as well.

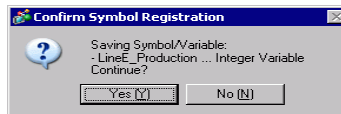
NOTE

- Without registering the symbol first, you can directly enter the symbol name in the address control box when designating the address. Once you enter the symbol, press the [Enter] key. When the following message appears, click [Register as Symbol]. Once registered, you can check the symbol in the Common Settings [Symbol Variable].

Address control box →

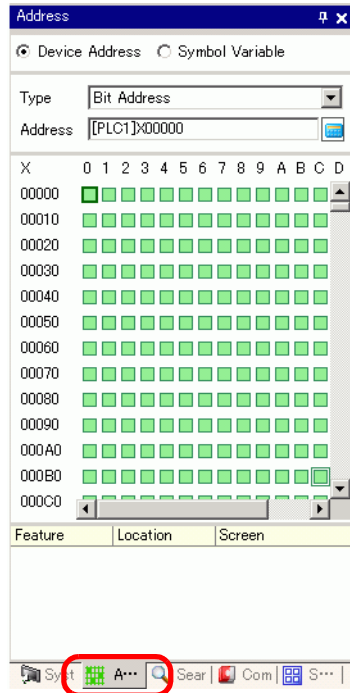


- For the [Register Variable] field, if you select [Variable Format] and [Register as Symbol], it is registered as a symbol of "word address" type. When you click [Register as Variable], it is registered as a variable of "integer variable" type. If you select [Address Format], the following message appears. Click [Yes] to register it as a "word address" type symbol.



■ Confirming the Symbol Registration

1 Click [Address] in the Work Space.



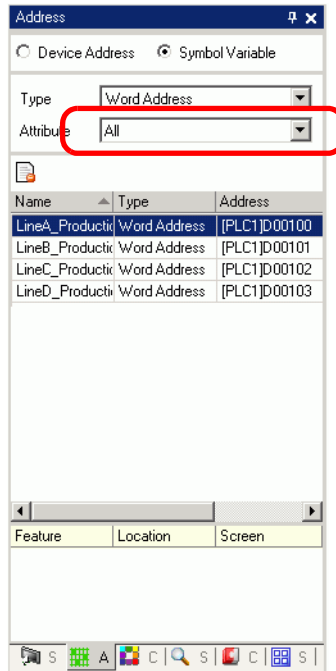
NOTE


- If the [Address] tab is not displayed in the Work Space, from the [View (V)] menu, point to [Work Space (W)] and select [Address (A)].

2 Select [Symbol Variable].

3 From the [Type] drop-down list, select the symbol's address type.

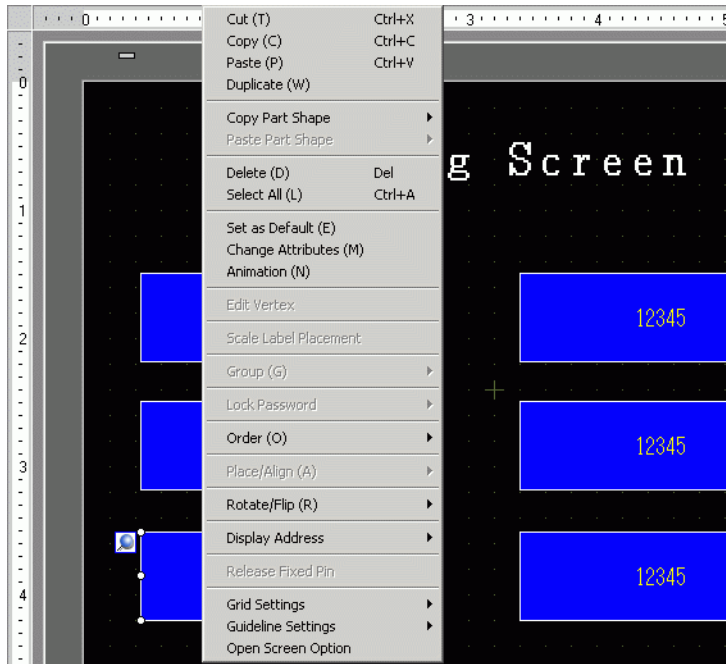
- 4 In the [Attribute] drop-down list, select the device/PLC for the symbol variable to display. The symbol variable's address list is displayed.

**NOTE**

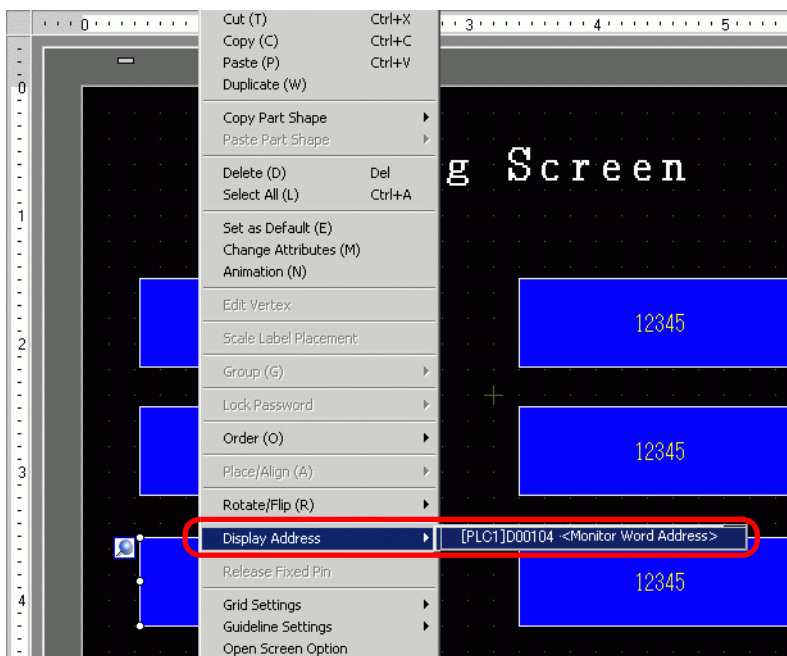
- To associate an address with a part, you can drag the address to a part displayed on the screen.
- When you double-click the address selected from the list, you can open the [Symbol Variable Settings] dialog box.
-  Click the icon to display the [Unused Symbol Variables] dialog box; then select Unused Symbol Variables. You can delete all the Symbol Variables that display in the list.

■ Checking each individual address in use

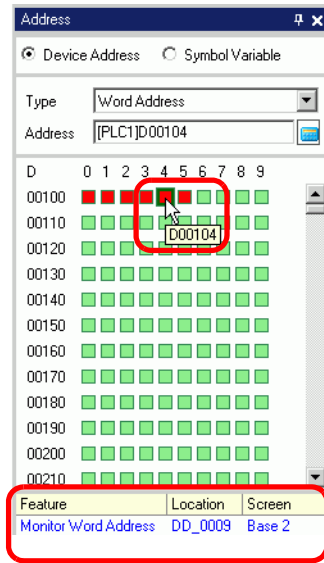
1 Select the part for which address you want to check and then right-click to view the menu.



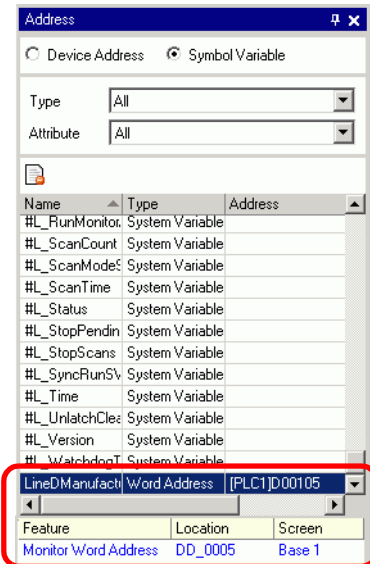
2 Point the cursor to [Display Address] to view the addresses assigned to the part.



- 3 Click the address to select the corresponding address on the [Address Settings] Window.
- When Bit or Word Addresses are set, the list of addresses for the device address displays.



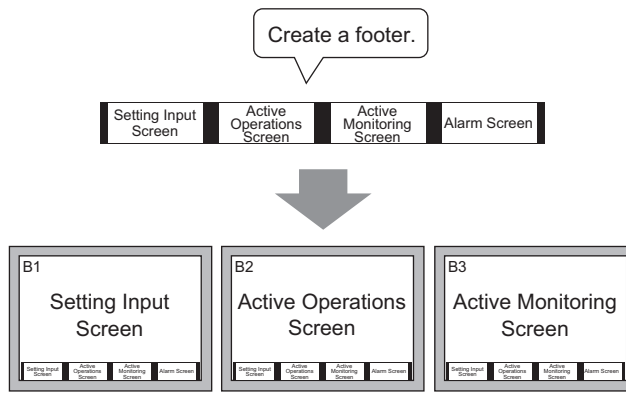
- When Symbol Variables are set, the list of addresses for the Symbol Variables displays.



NOTE • Click the icon to display the [Unused Symbol Variables] dialog box, then select Unused Symbol Variables. You can delete all the Symbol Variables that display in the list.

5.10 Using Headers and Footers on a Screen

5.10.1 Introduction

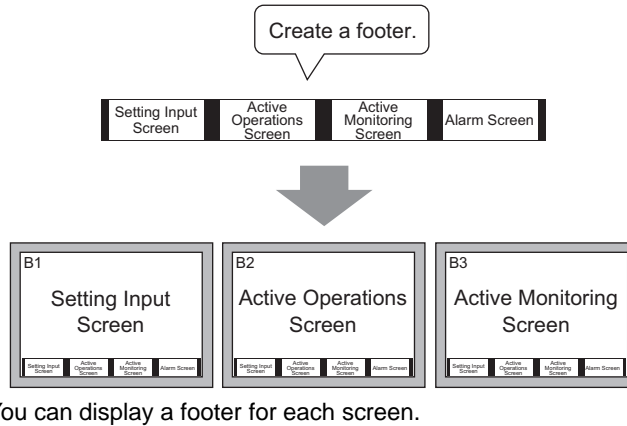



You can display a footer for each screen.

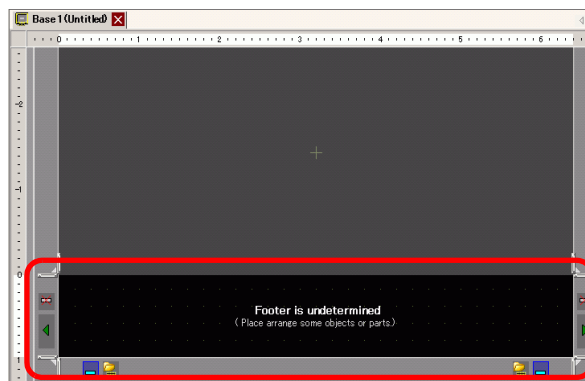
You can display the same header/footer on multiple screens.

You can create up to 20 headers and 20 footers.


5.10.2 Setup Procedure



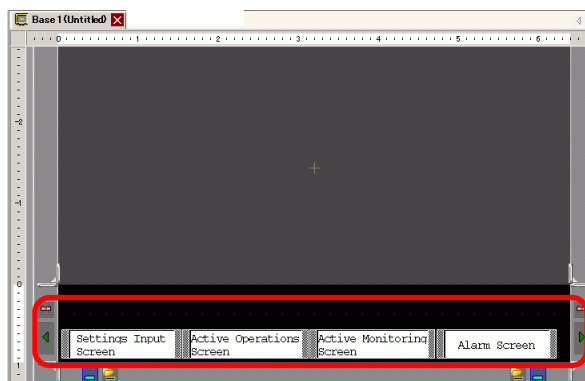
- 1 To display the footer screen area, from the [View (V)] menu, select [Footer (F)] or click the [Edit Footer] button  at the bottom of the screen editor.






NOTE


- To display the header screen area, from the [View (V)] menu, select [Header (H)] or click the [Edit Header] button  at the top of the screen editor.

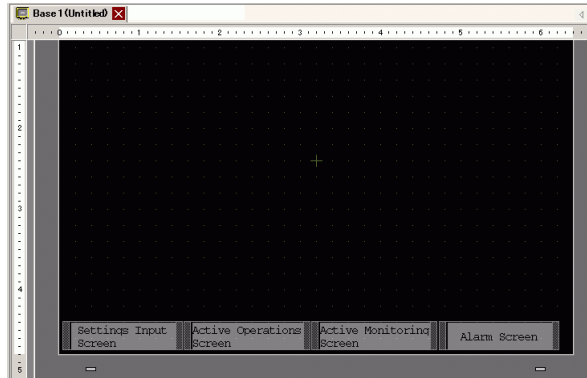
- 2 Create a screen in the footer editing area.



NOTE


- To delete the created footer area, click .
 - To create another footer, click the [Next Footer] button , or click the [Select Footer] button  and in the footer list click [New].
-

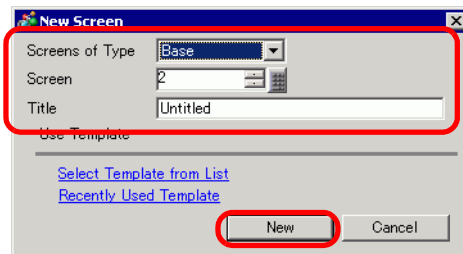
3 Click the [Disable footer edit] button  to close the footer area.


**NOTE**

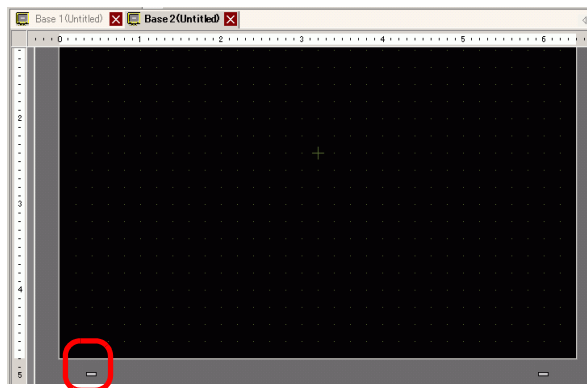
- You can create up to 20 headers and 20 footers.
 - You can specify a comment in each header/footer screen. The comment is displayed in the bottom right corner of a header/footer screen. To specify a comment, from the [View (V)] menu, point to [Work Space (W)] and select [Properties (P)]. In the Properties' dialog box, enter your comments.
 - If you change from a high resolution GP model to a low resolution model, the headers and footers are not scaled down. After changing the display model, you need to adjust the header/footer size and position.
-


■ Reusing a Header/Footer

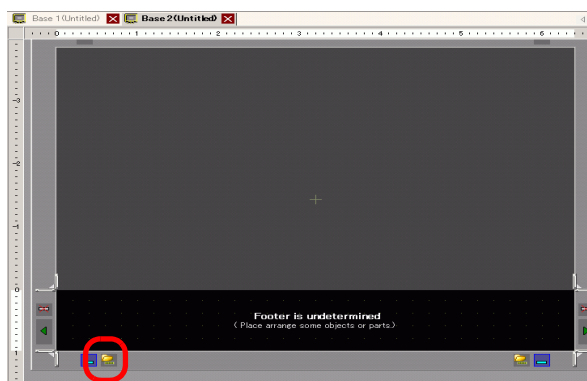
- 1 From the [Screen (S)] menu, select [New Screen (N)] or click the [New Screen] button .
- 2 In the [New Screen] dialog box, specify [Screens of Type], [Screen], [Title] and click [New].



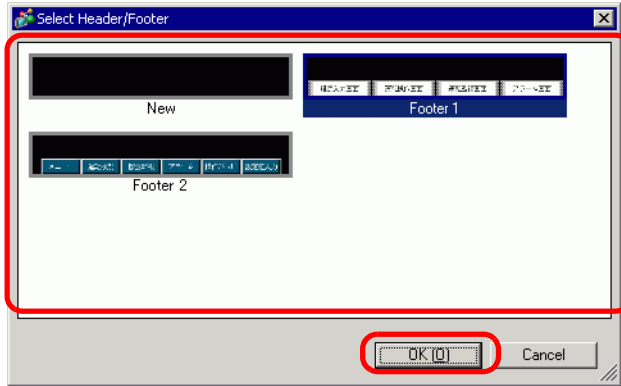
- 3 A new Base Screen will display. From the [View (V)] menu, select [Footer (F)] or click the [Edit Footer] button  at the bottom of the screen editor.




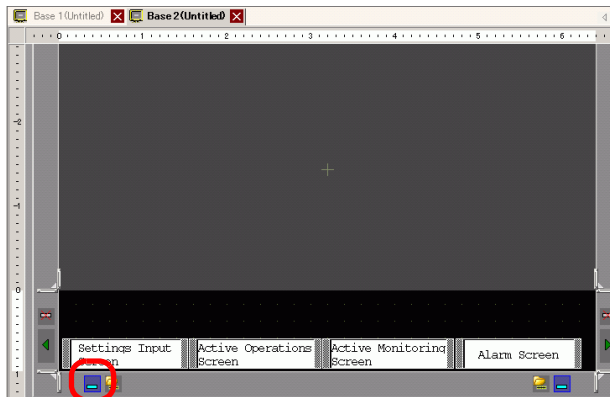
- 4 The footer screen editing area is displayed. Click the [Select footer] button .




5 The registered footers are listed. Select the footer you wish to use and click [OK].

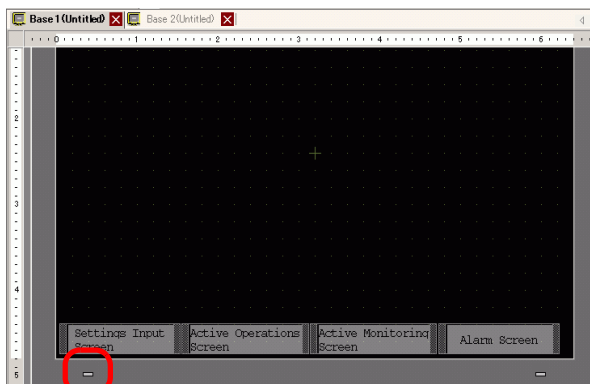


6 The selected footer is displayed. Click the [Disable footer edit] button  to close the editing area.






■ Removing a Header/Footer

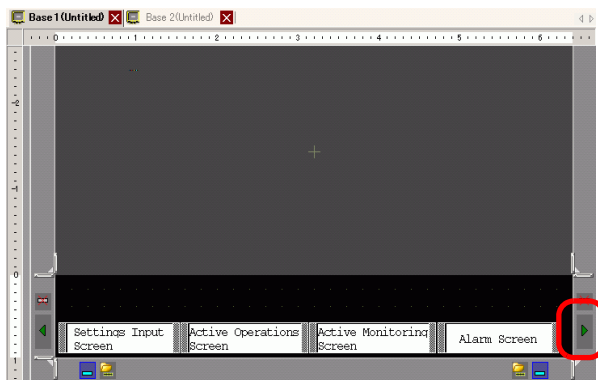
1 Open the screen with the footer you want to remove and click the [Edit Footer] button .




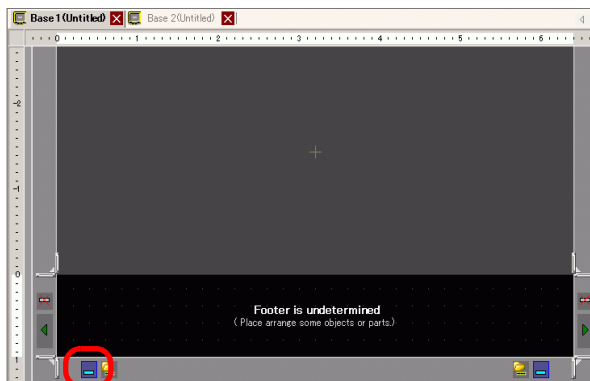
NOTE

- To view a header, from the [View (V)] menu, select [Header (H)] or click the [Edit Header] button  at the top of the screen editor.

2 Click the [Next Footer] button  or the [Select Footer] button  and select a blank footer.

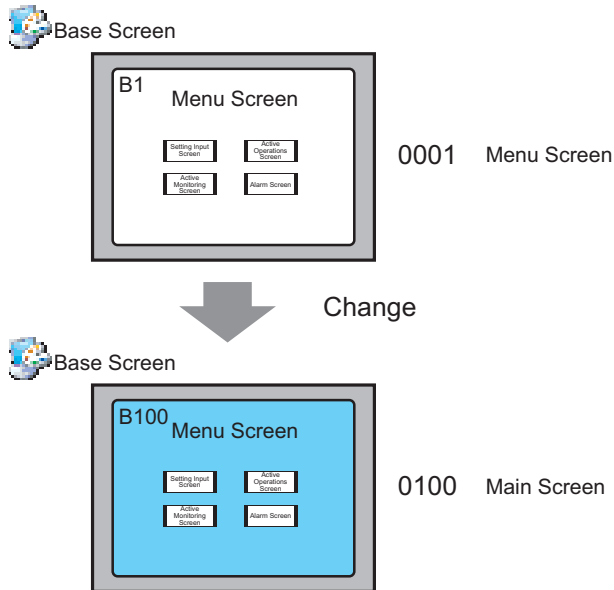


3 Click the [Disable footer edit] button  to close the editing area.



5.11 Changing the Screen Number, Title, or Screen Color

5.11.1 Introduction

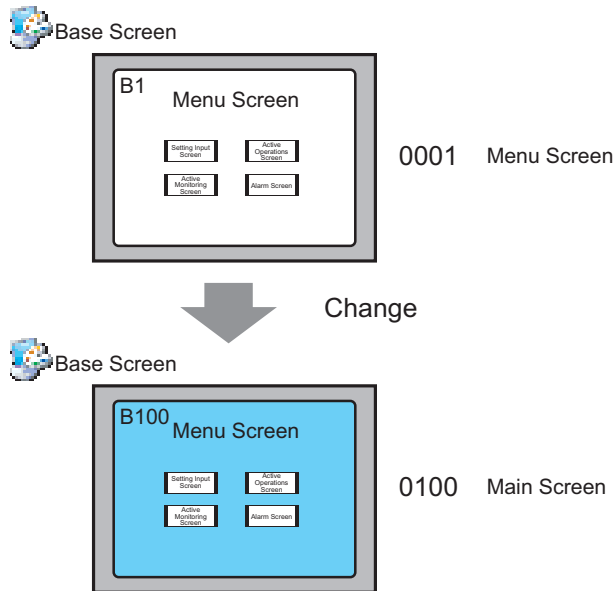



In the project, you can change the screen number, title, and color.

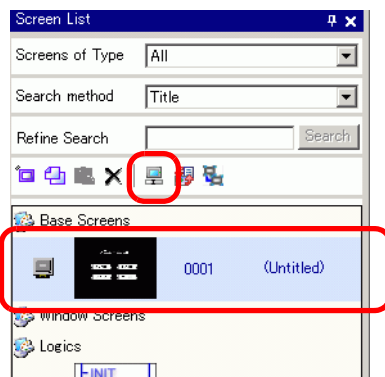
5.11.2 Setup Procedure

NOTE

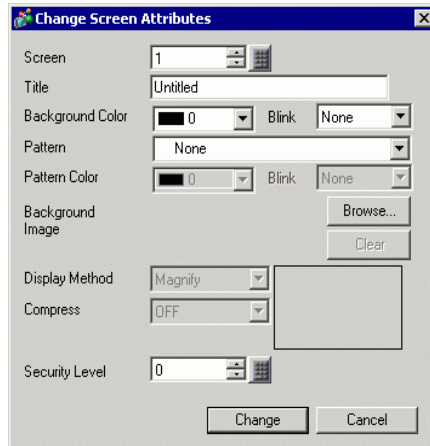
- Please refer to the Settings Guide for details.
☞ "5.17.5 [Work Space] Settings Guide ■ Screen List" (page 5-133)



1 From [Screen List] window, select the screen with the attribute you want to change and click the [Change Screen Attributes] icon .



2 The [Change Screen Attributes] dialog box appears.



NOTE

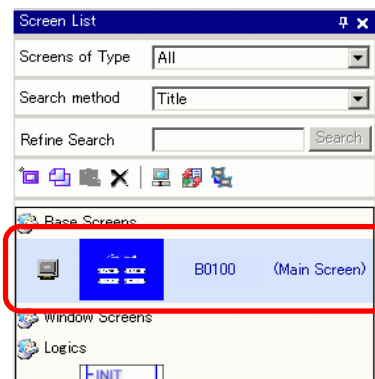
- You can also display the [Change Screen Attributes] dialog box by double-clicking the screen tab.

3 Change the [Screen Number], [Title], and [Background Color].
(For example, Screen: 100, Title: Main Screen)

NOTE

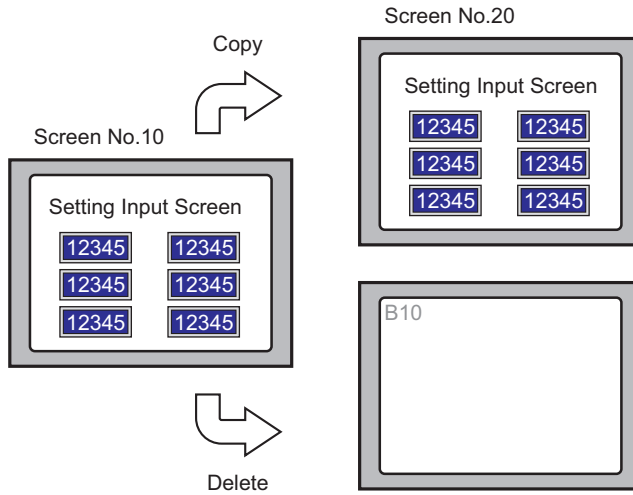
- You can use an image for the background. In the [Background Image] field, click [Browse] and select an image.
- To specify the [Security Level], see the following section.
☞ "22.2 Creating Limited Access Screens" (page 22-5)

4 The screen attribute is updated.



5.12 Copying/Deleting a Screen

5.12.1 Introduction

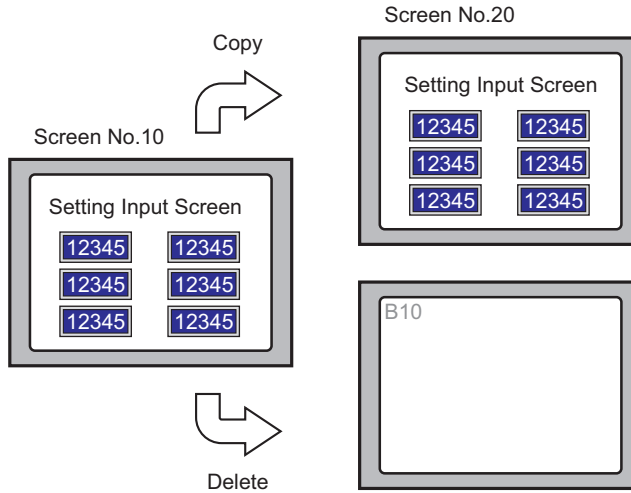


You can copy or delete a screen.


5.12.2 Setup Procedure

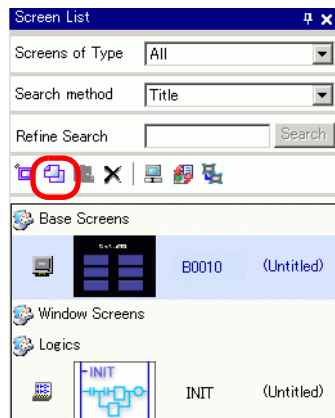
NOTE


- Please refer to the Settings Guide for details.
 ☞ "5.17.5 [Work Space] Settings Guide ■ Screen List" (page 5-133)

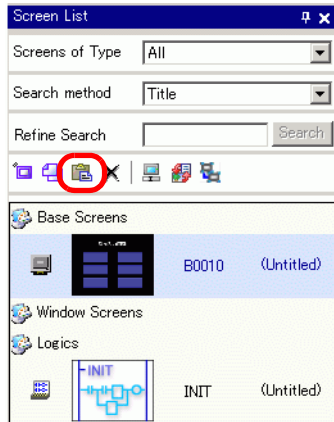


■ Copying a Screen

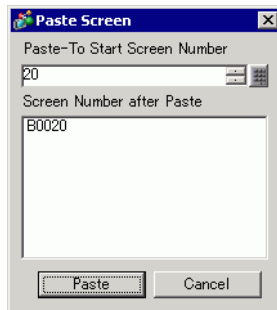
- 1 In the [Screen List], select the screen you want to copy from and click [Copy] .



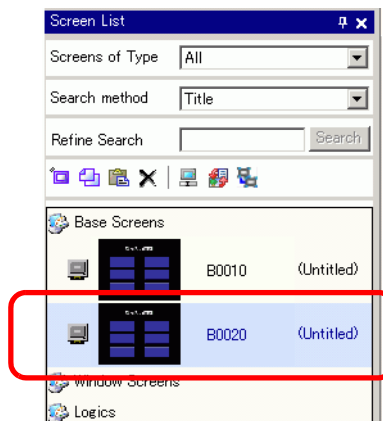
2 Click the [Paste] icon  .



3 In the [Paste Screen] dialog box, specify the [Paste-To Start Screen Number] and [Screen Number after Paste] and click [Paste]. (For example, [Paste-To Start Screen Number] 20)




4 A thumbnail view of the pasted screen is displayed in the [Screen List].

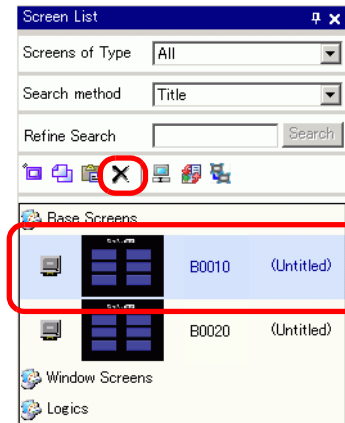


NOTE

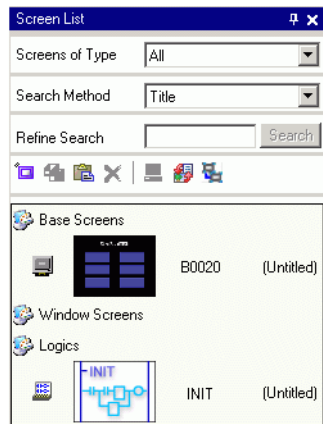
- To select multiple screens at a time, select the target screens on the [Screen List] with the [Shift] key + click, or the [Ctrl] key + click.

■ Deleting a Screen

1 In the [Screen List], select the screen you want to delete and click the [Delete] icon .



2 The screen is deleted from the [Screen List].

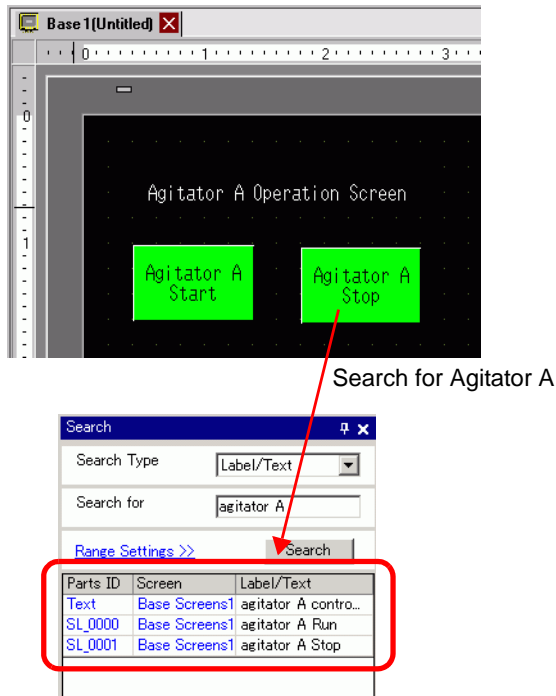


NOTE

- To select multiple screens at a time, select the target screens on the [Screen List] with the [Shift] key + click, or the [Ctrl] key + click.

5.13 Searching/Replacing Parts Addresses, Labels, and Comments in Parts

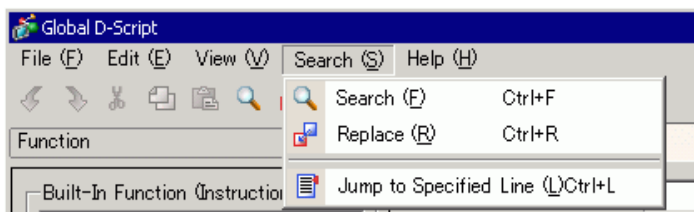
5.13.1 Introduction



You can search and replace the addresses, labels, and comments of the parts used on the screen.

NOTE

- You cannot search addresses and texts if they are used in the [Common] settings. You can search parts or drawings found on a base screen, window screen, video screen, and header/footer.
- You cannot search addresses and comments if they are used in scripts. To search texts used in scripts, go to the [Search] menu in the Settings dialog box. For example, Global D-Script.



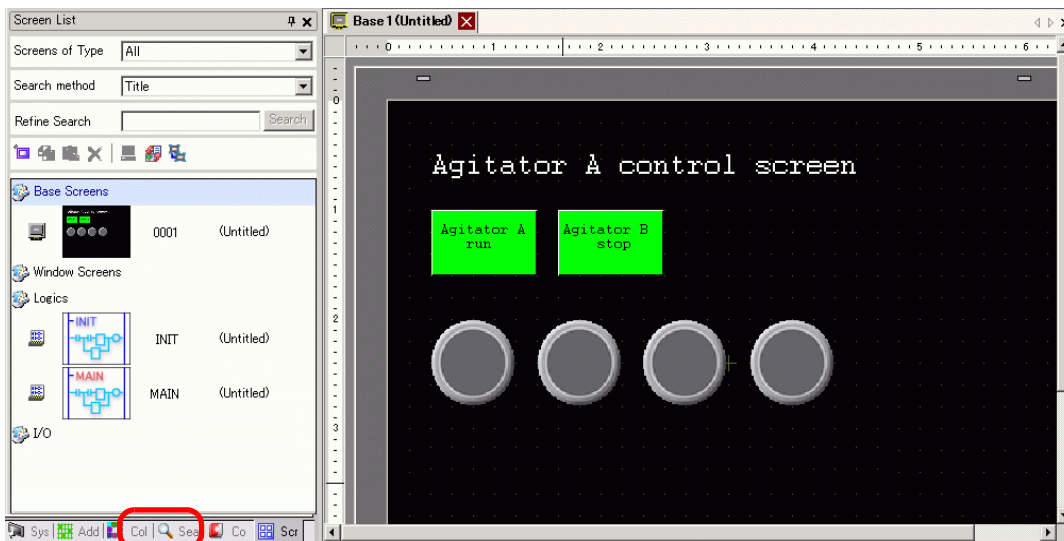
- You cannot perform [Search] and [Replace] on the Logic Screen.

5.13.2 Setup Procedure

NOTE

- Please refer to the Settings Guide for details.
 ☞ "5.17.5 [Work Space] Settings Guide ■ [Search]" (page 5-139)

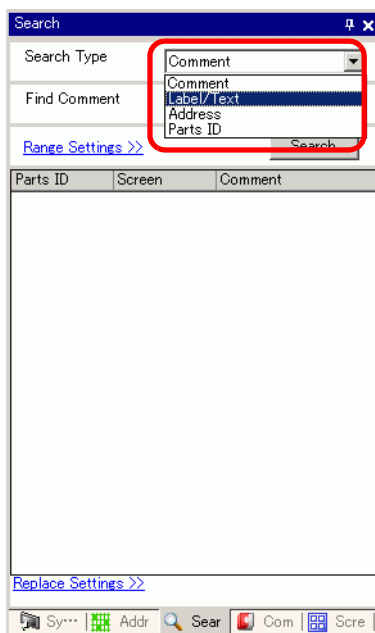
1 Click the [Search] tab in the work space.



NOTE

- If the work space does not have the [Search] tab displayed, from the [View] menu, point to [Work Space (W)] and select [Search (F)].

2 The [Search] window appears. Select the search target from [Search Type]. For example, [Label/Text].

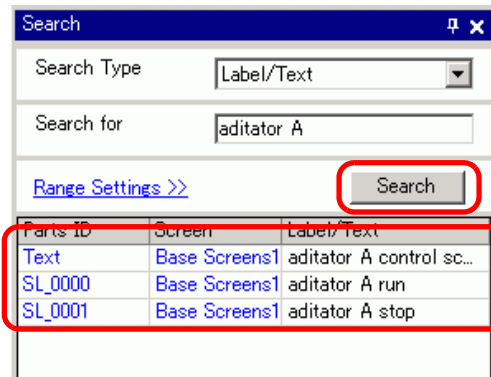


3 Enter the text you want to search for (For example, Agitator A).

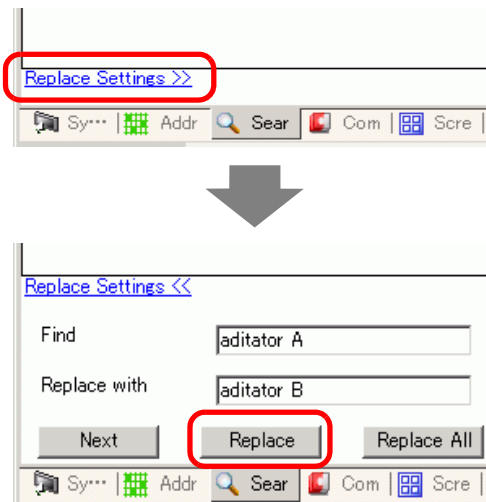
NOTE

- To search for [Comment] or [Label/Text], the following search is also available.
 For example, 1) In [Find Comment], enter "Alarm?"
 [Alarm A] comes up in the search but not [Alarm AB], which has different numbers of characters.
 For example, 2) In [Find Comment], enter "Alarm*"
 [Alarm A] and [Alarm AB] comes up in the search.

4 Click [Search]. The search results appear.



5 To replace the found text into another text, click [Replace Settings]. From the search results, select the line of the parts you wish to replace and enter the new text and click [Replace].

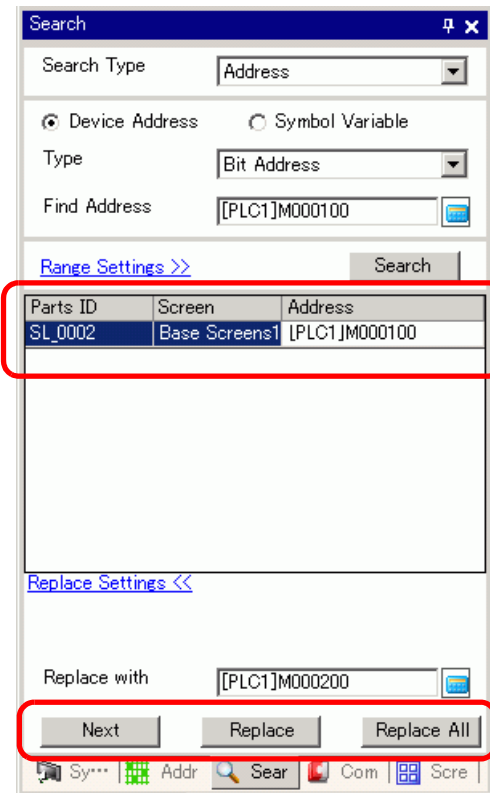


NOTE

- To replace all the texts of multiple parts from the search result, select the relevant line with pressing the CTRL key. Use the SHIFT key to select multiple lines in sequence.

NOTE

- You can only replace [Comment], [Label/Text], and [Address] not [Parts ID].
- To replace [Address], select the address to replace from the search result. Once entering [Replace with], click [Replace] or [Replace All].



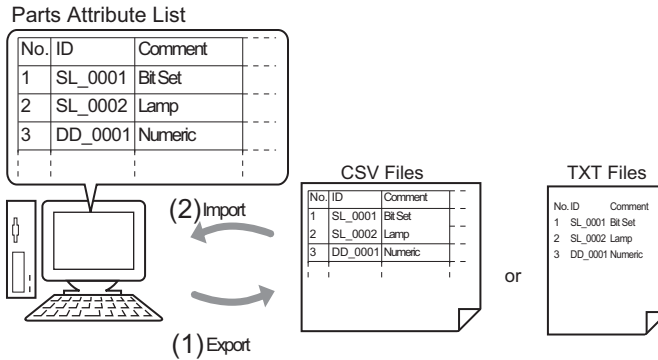
5.14 Changing Parts Attributes All at Once

5.14.1 Introduction

For parts currently in use in a project, you can save (export) its attributes as a list in the CSV or text format. You can edit the saved file in the Microsoft Excel application or Notepad. To change all settings at once, import the edited file (the list of attributes) to a project file. When parts are of the same kind, you can select them together on the screen editor and change all the settings at once.

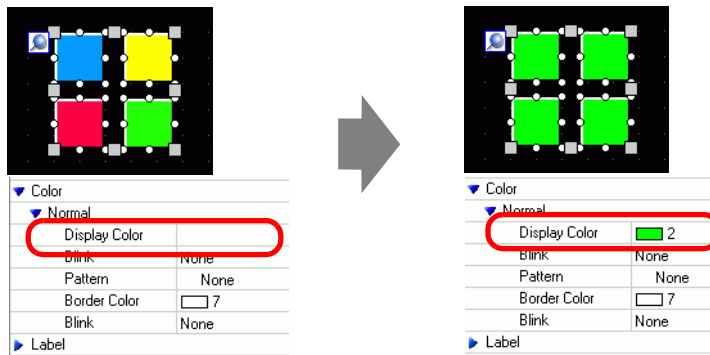
■ Export to a file to change all attributes at once

Save (export) to a file the list of attributes registered in the project file in the CSV or text format. Edit the settings of the saved file in the Microsoft Excel application or Notepad and import it to the original project file to change all the attributes of the parts at once.



■ Change all the common attributes on the screen editor at once

For same parts with the same features, you can select them together and change all the attributes at once.



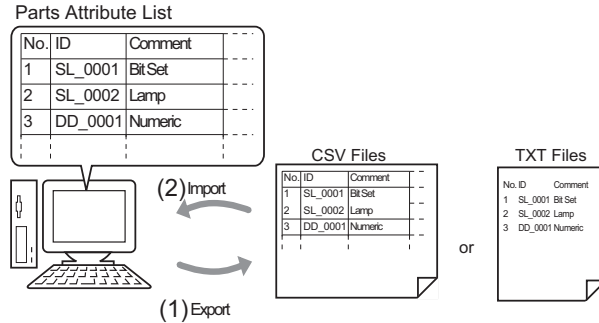
5.14.2 Setup Procedure

NOTE

- Please refer to the Settings Guide for details.
 - ☞ "5.17.9 [Screen] Settings Guide ■ Change View" (page 5-205)
 - ☞ "5.17.5 [Work Space] Settings Guide ■ Properties" (page 5-135)

■ Export to a file to change all attributes at once

To change all attributes at once, you can export the list of attributes of parts in the CSV or text format, edit the settings and import it back to the original project file.

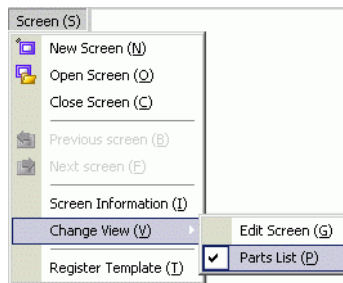


NOTE

- When you import, you can only update the attributes for the [Switch/Lamp] and the addresses/labels of the [Data Display].

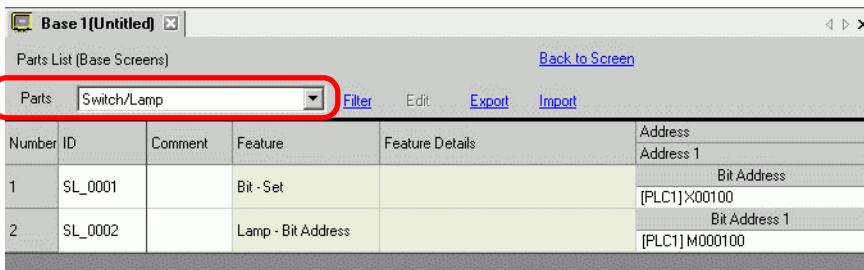
◆ Export

1 From the [Screen (S)] menu, click [Change View (V)] - [Parts List (P)]



The screen editor changes to the screen listing parts.

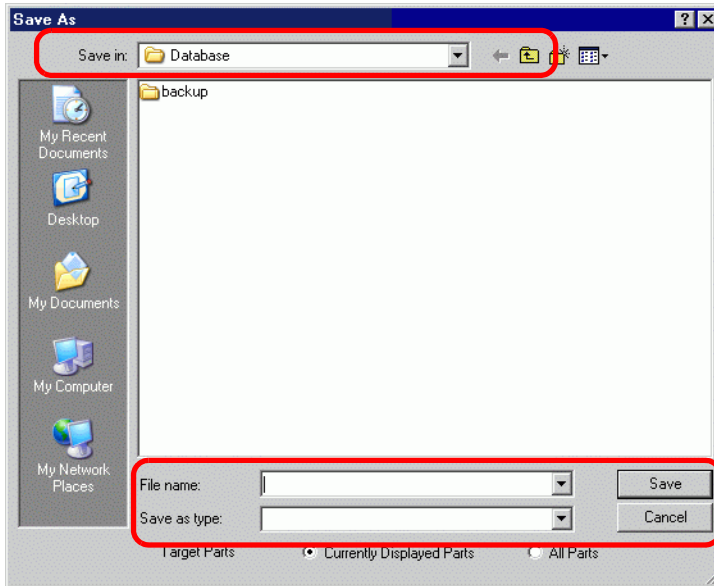
2 The attributes of the parts selected in [Parts] display in a list.



NOTE

- [Draw], [Trigger Action] and [D Script] do not display in a list.

- 3 Click [Export] and set [Save In (I)], [File Name (N)], [File Type (T)] and [Target Parts] in the following dialog box. Then click [Save (S)].



The file of the list of attributes will be outputted in the specified format, and export is completed.

◆ Edit

- 4 Edit addresses and labels of an exported file with the Microsoft Excel application or Notepad.

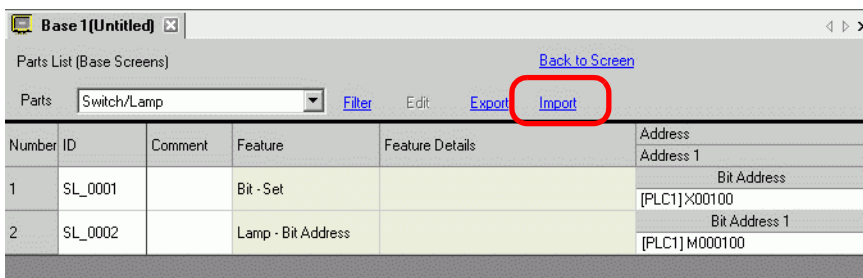
The edited file is saved in the same format that it was exported from (for example, CSV or text format).

NOTE

- Editing is available only for [Switch/Lamp] and the addresses/labels of [Data Display]. The attributes are not updated if you edit the other items.

◆ Import

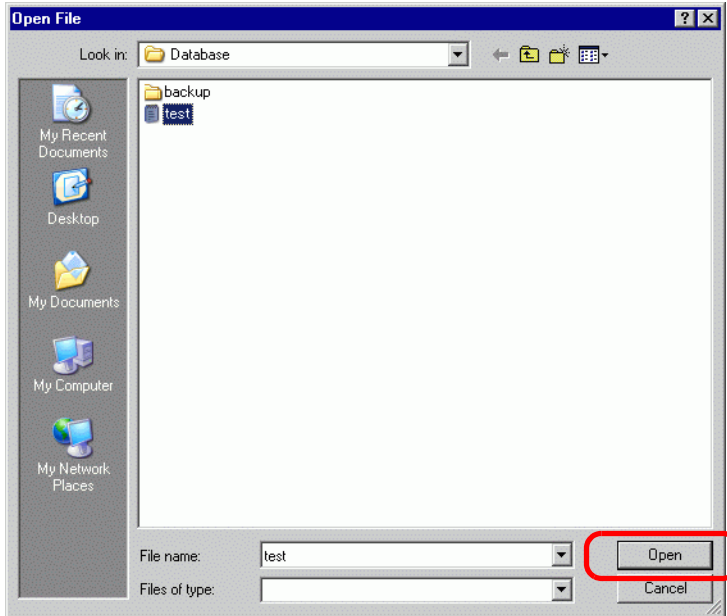
- 5 Click [Import] on the Parts List screen.



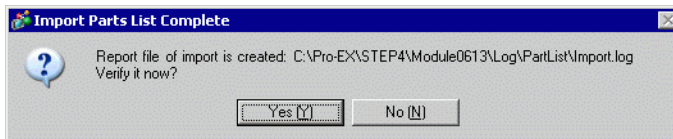
NOTE

- When importing, the features of the parts in the project file must all correspond with the features described in the file to successfully update the attributes. If a feature does not match with anything in the file, the part cannot be updated.

6 In the dialog box that follows, specify the file you want to import and click [Open].



7 The following message appears after import completes. To check the results of the import, click [Yes] to display a log file.



NOTE

- Only the successfully updated parts display in the import log file, separated by type and in the order shown on the screen editor.

```
Import Parts List

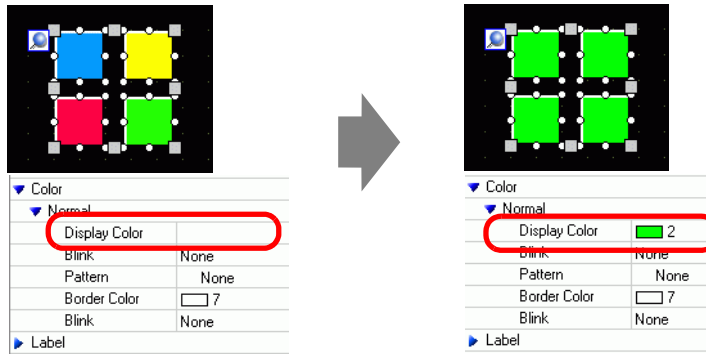
Date :2007/07/02 10:42:47
File :test.csv
Project:abc.prx

[Switch / Lamp]
editor No.1 <-- file No.1
           No.2 <-- file No.2

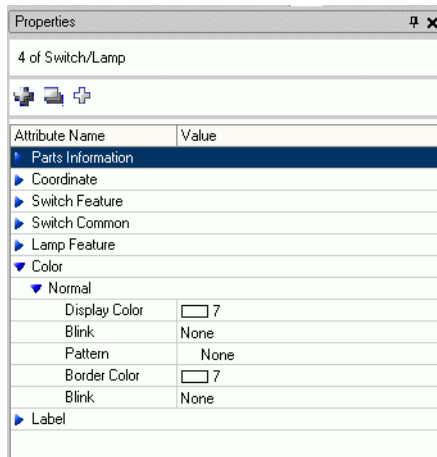
[Data Display Parts]
editor No.1 <-- file No.1
```


■ Change All the Common Attributes at Once Time

To change all attributes at once, you can select all the same parts with the same features.



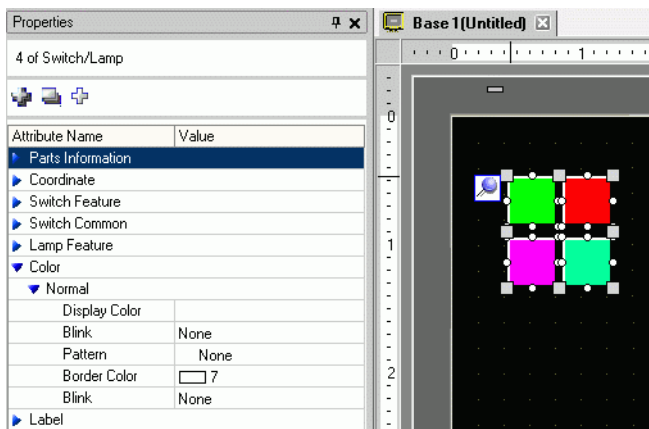
1 Click the [Properties] tab in the Work Space.



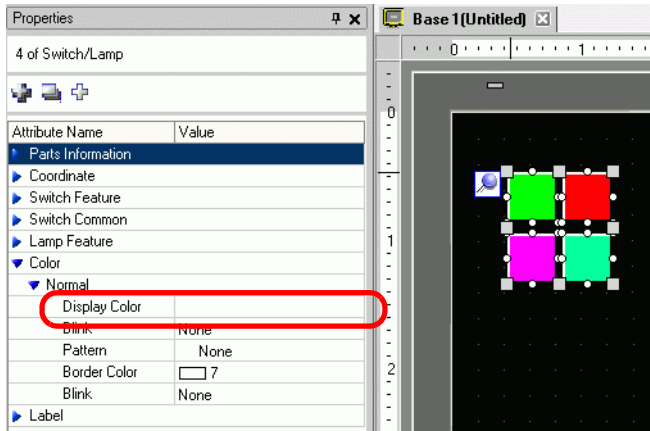
NOTE

- If the [Properties] tab does not display in the Work Space, go to the [View (V)] menu, point to [Work Space (W)] and click [Properties (P)].

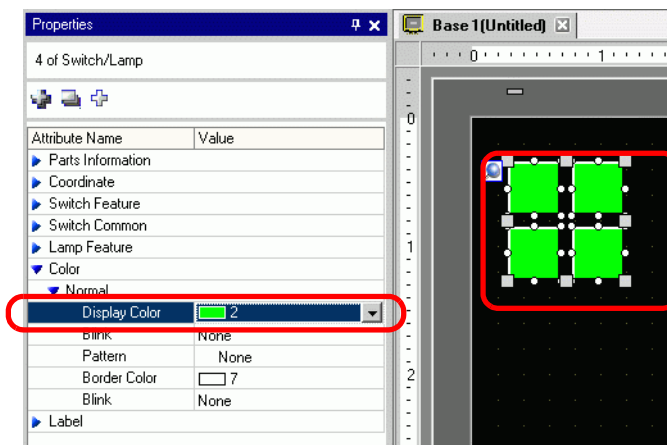
2 Press the [Shift] key and click the mouse to select the parts that have attributes that require changes.



- 3 The setting detail displays when the items have the same setting. When they differ, a blank space displays.



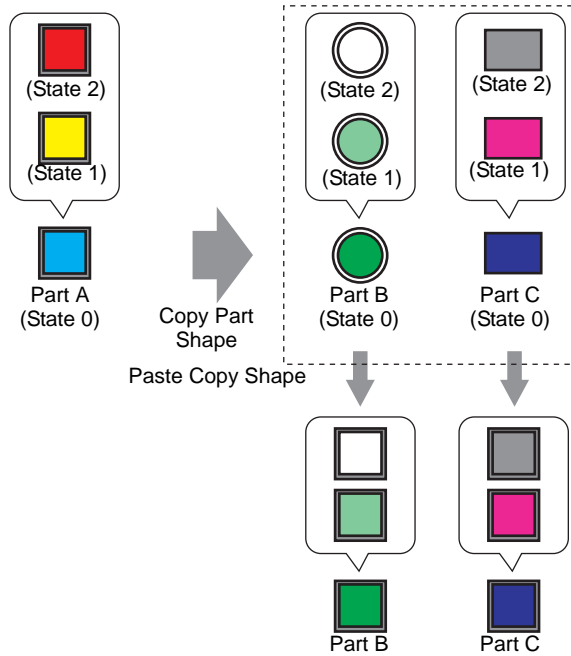
- 4 When you enter a setting in the blank space, the attributes for all the selected parts change to that setting.

**NOTE**

- When the parts have several features, those features do not display on the Properties window even if you select multiple features.

5.15 Changing All Parts Shapes

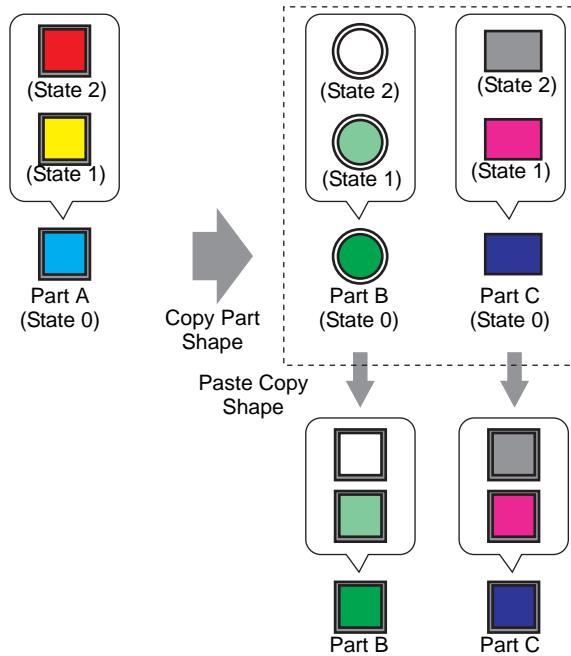
5.15.1 Introduction



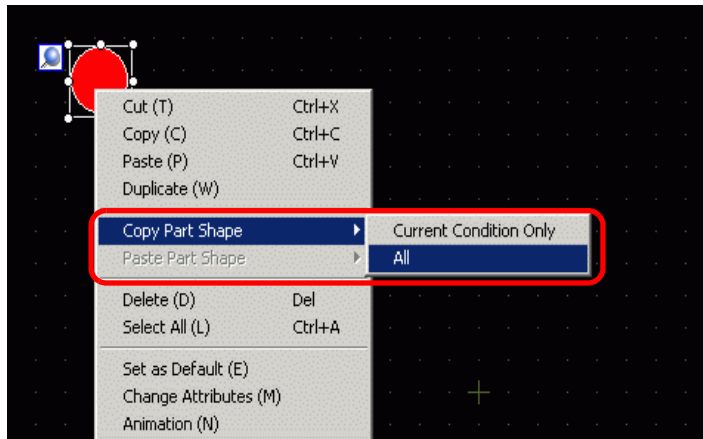
You can copy the shape from one of the parts on the screen to all the other parts. Plus, you aren't restricted to copying only the current state. You can copy and paste the part shapes from all the states set up in the part to the corresponding states in other parts.

5.15.2 Setup Procedure

Copy the shape of each state in a part.

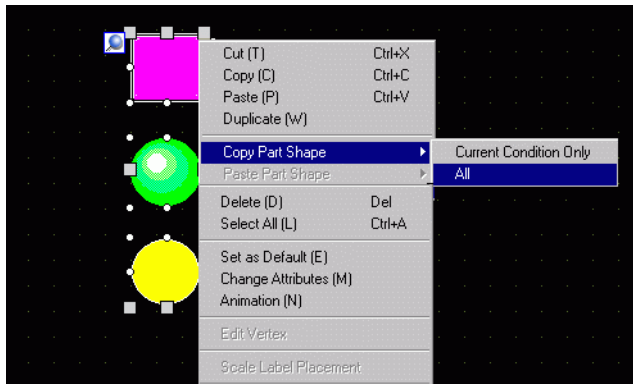


1 Right-click the part whose you want to copy, point to [Copy Part Shape], and click [All].

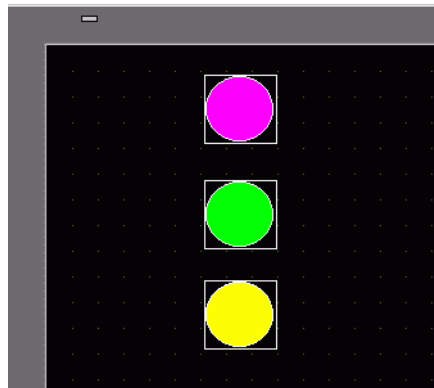


- NOTE**
- You can also use [Edit (E)] menu's [Copy Part Shape] command.
 - Use [Current Condition Only] to copy the currently displayed part shape only.

- 2 While holding down the [Shift] key, select the parts you want to paste with the copied part shapes. Right-click on the selected area, point to key, select [Paste Part Shape] and click [All].



- 3 The parts now display the pasted shape.

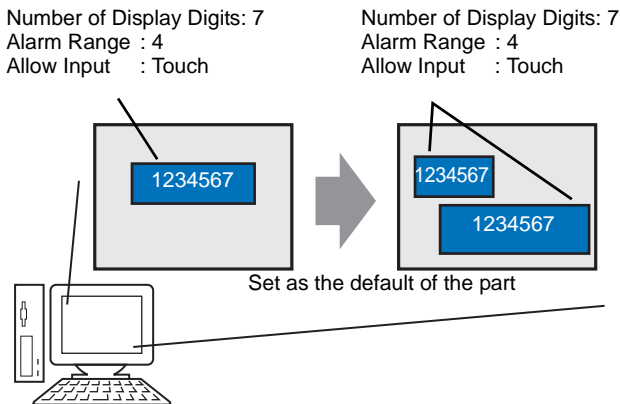


NOTE

- When there are more states in the copied part than in the pasted part, shapes in only the corresponding states will be pasted. If there are more states in the pasted part than the copied part, states without a corresponding state in the copied part will remain unchanged.
-

5.16 Set as Default Using Placed Parts

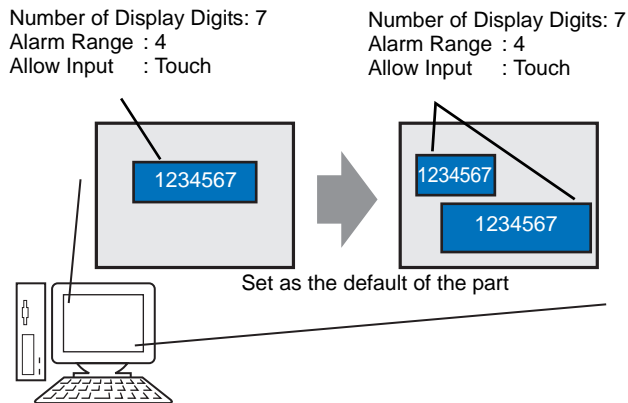
5.16.1 Introduction



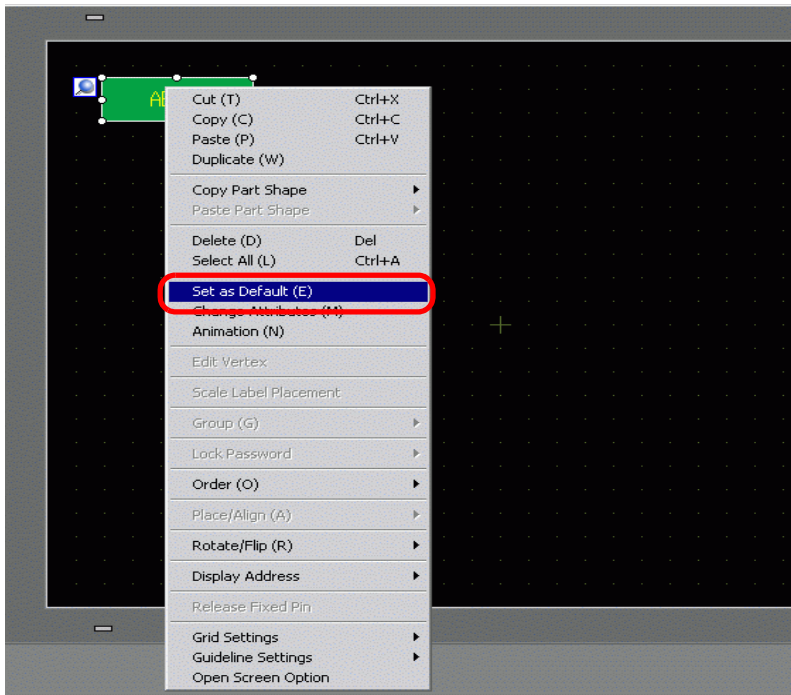
When you set as default the properties from parts or drawings on a screen, the same attributes become the default when drawing parts and graphics on other screens.

The default settings remain valid until you exit the application. Using this feature, you can reduce the number of steps in your drawing process as there is less changing display properties, and less copying and pasting parts and graphics between projects and screens.

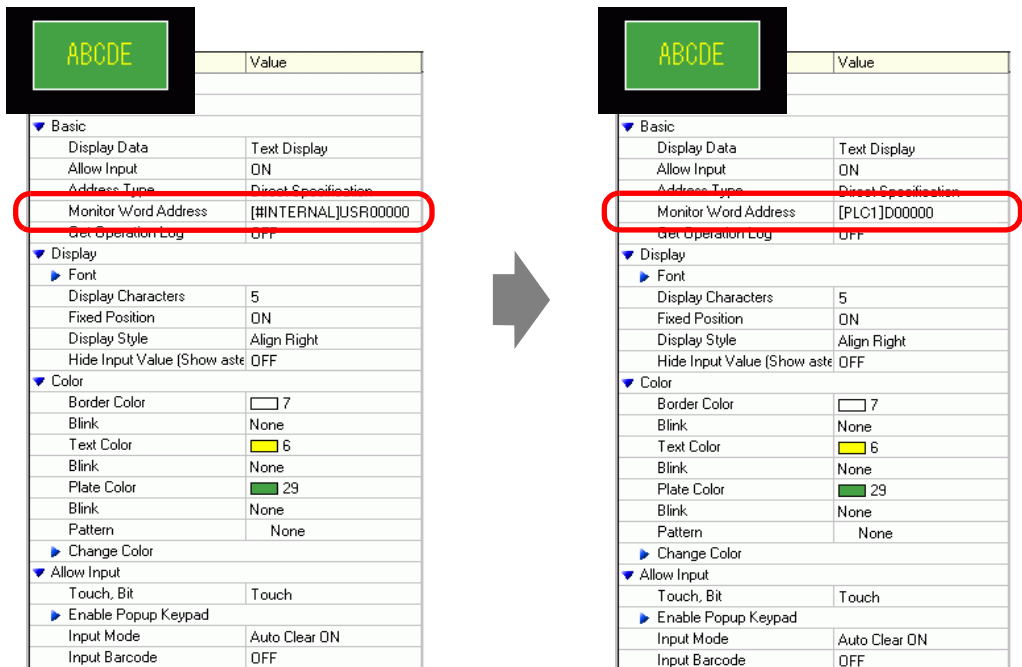
5.16.2 Setup Procedure



- 1 Right-click the part with properties you want to use as the default and select [Set as Default (E)].



2 By defining the most commonly used property values as your default, drawing parts can be accomplished easily as the only remaining task would be to define the Device/PLC attributes and address values.



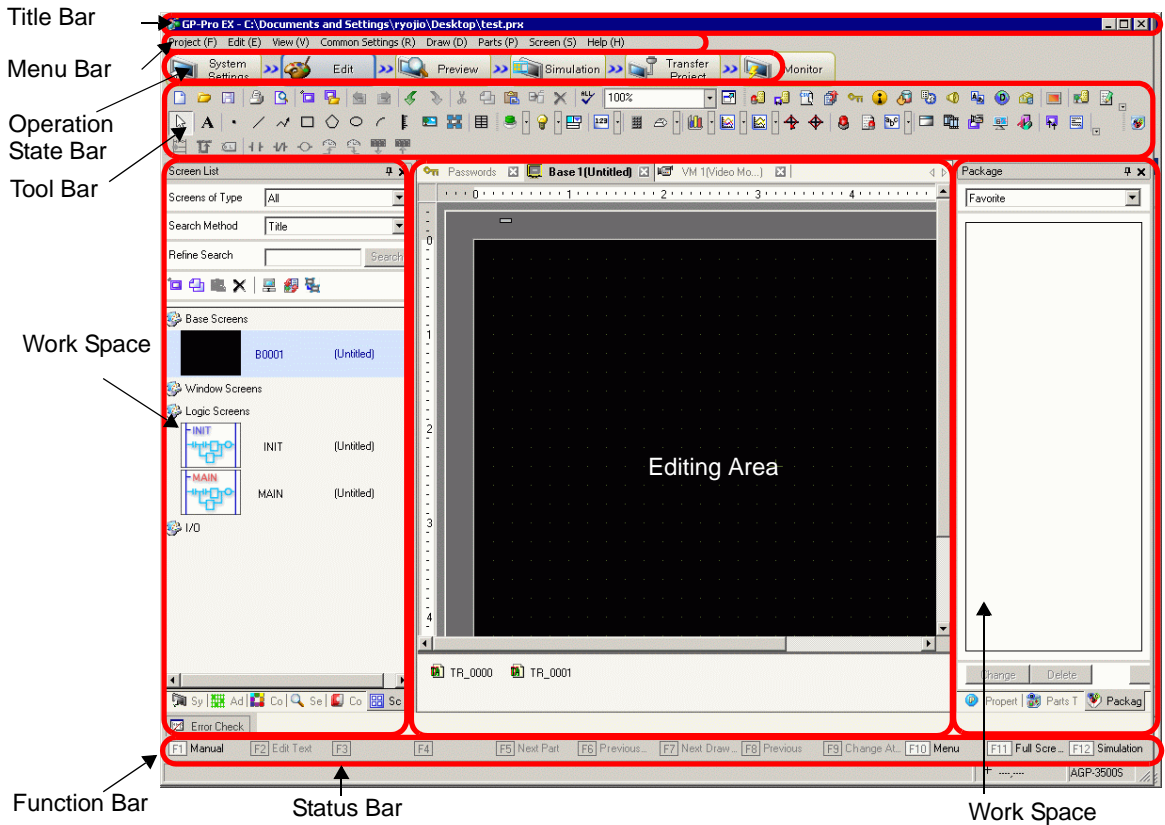
NOTE

- To reset the default values, from the [View (V)] menu click [Preferences (O)], select [Clear Edit Style] and click [Clear Defaults]. Or, exit GP-Pro EX.

5.17 Settings Guide

5.17.1 Main Window Part Names

GP-Pro EX's basic screen part names and functions are as follows:






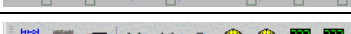

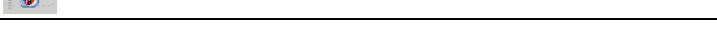

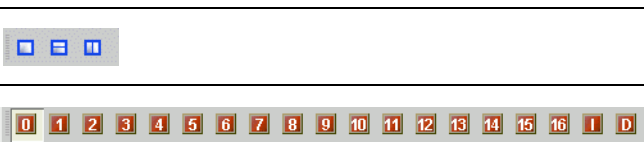


Setting	Description
Title Bar	Displays a project file name or screen title.
Menu Bar	Displays GP-Pro EX operation menus. Available menus change depending on what you are editing.















Continued

Setting	Description
Operation State Bar	<p>Select from [System Settings], [Edit], [Preview], [Transfer Project], or [Monitor] to switch to the operation screen.</p> <ul style="list-style-type: none"> • System Settings System Settings: Displays the System Settings window and in the editing area the previously selected settings. ☞ "5.17.6 [System Settings] Setting Guide" (page 5-145) • Edit Displays the screen editor in the workspace. You can draw graphics and define common settings. • Preview Displays the preview screen. Here you can confirm the display state of screens. You can copy previews to the clipboard or save them as JPEG files. • Simulation Starts Simulation. You can check actions before you transfer the project file and without connecting to the PLC. • Transfer Project Transfer Tool launches. ☞ "33.10 Setting Up Transfer Tool" (page 33-58) • Monitor When the display unit is connected to the PC, you can view the operation and state of the logic program on the display unit from the PC. ☞ "29.11 Monitoring Logic Programs on the Computer (Online Monitor)" (page 29-79)


Continued

Setting	Description
<p>Tool Bar</p>	<p>Displays command icons, such as Part, Draw or Edit. Click one of these icons with the mouse to execute the operation.</p> <p>You can show or hide the toolbar. From the [View (V)] menu, select [Toolbar (T)]. Also, the bar can be moved by dragging and placing it on the left, right, top, or bottom of the screen. Listed are the following sections on the Tool Bar.</p> <p>NOTE</p> <ul style="list-style-type: none"> You can customize the toolbar depending on frequency of use. On the [View (V)] menu, point to [Preferences (O)], select [Toolbar], and click [Toolbar Settings]. The Toolbar Settings window appears. It allows you to add and delete icons. Alternatively, right-click the icon on the tool bar to display the Toolbar Settings window.
<p>Standard</p>	
<p>Edit</p>	
<p>Display</p>	
<p>Draw</p>	
<p>Parts</p>	
<p>Instructions</p>	
<p>Package</p>	
<p>Common Settings</p>	
<p>Editing Area Tiling</p>	
<p>Change part state</p>	


Continued

Setting	Description
Work Space	Displays a Window. By dragging a Window, you can move and place it in the desired position. Displays the following types of Windows.
[System Settings] [Address] [Common Settings] [Screen List] [Search]	Displays [System Settings], [Address Settings], [Common Settings], [Screen List], and [Search]. <ul style="list-style-type: none"> • System Settings Window  " ■ System Settings" (page 5-126) • Address Settings Window  " ■ Address Settings" (page 5-128) • Common Settings Window  " ■ Common Settings Window" (page 5-130) • Screen List Window  " ■ Screen List" (page 5-133) • Search  " ■ [Search]" (page 5-139)
Properties	Displays the selected part or screen's attributes to confirm or edit the attributes.  " ■ Properties" (page 5-135) <p>NOTE</p> <ul style="list-style-type: none"> • This window is displayed the first time you start up the GP.
Parts Toolbox	This window lists the shapes of the parts. This allows you to select, drag and drop, and place the shapes you wish to use onto the screen.  " ■ Parts Toolbox" (page 5-142)
Package	Lists the pictures in the packages registered under [Package List].  " ■ Package" (page 5-143)
Color	Displays the color palettes available for the selected models in the display. When you drag and drop the selected color onto the color attributes of the parts, it enables you to change the color.  " ■ Color Settings" (page 5-144)
Screen Data List Window	Displays a list of drawings and Parts on the screen.  " ■ Screen Data List Window" (page 5-137)
Comment List	 "5.17.5 [Work Space] Settings Guide ■ Comment List Window" (page 5-144)
Watch List	 "29.14.2 [Work Space] Settings Guide n Watch List" (page 29-165)
Error Check	Displays a list of errors found on the created screen. You can execute an error check by clicking the icon in the window.  " ■ Error Check" (page 5-191)
PID Monitor	 "29.14.2 [Work Space] Settings Guide n PID Monitor" (page 29-161)

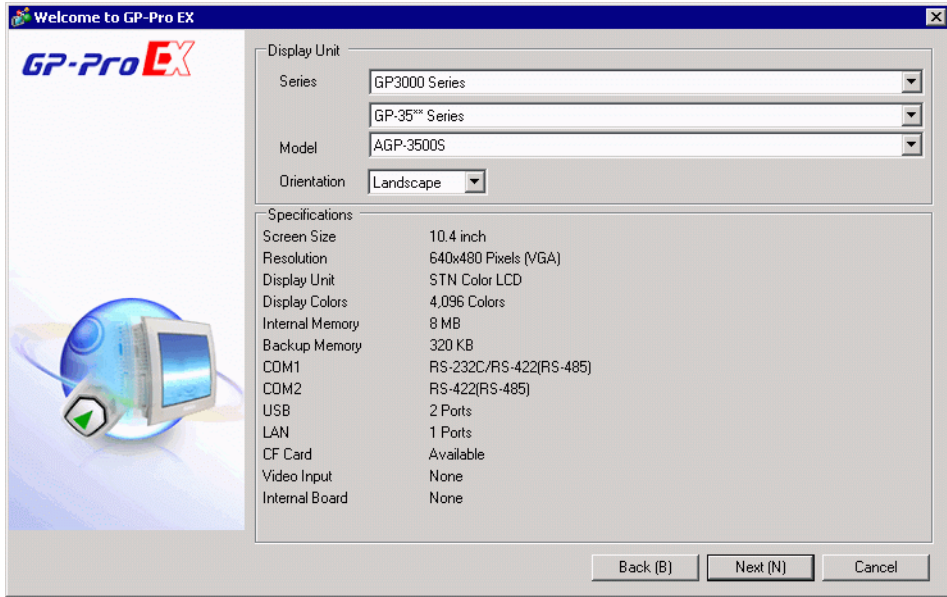
Continued

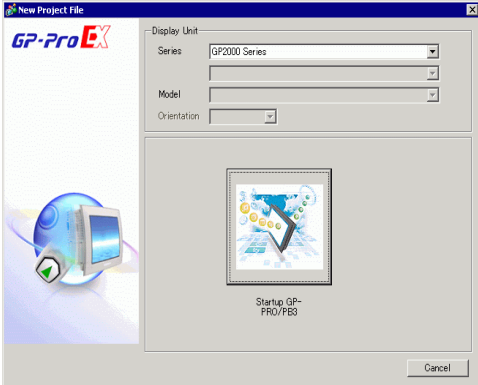
Setting	Description
Editing Area	<p>This is the area used to edit a screen. The editing area displays Base Screens, Window Screens, or the registration of each function's [Common Settings] and setting screens.</p> <p>You can change the display method of the editing area using the [Editing Area (B)] option from the [View (V)] menu. When the Base Screen or Window Screen is displayed, from the [View (V)] menu you can change the display condition using [Zoom (Z)] or [Change Language (L)].</p>
Status Bar	Displays the specified model and the coordinate position of the mouse pointer in the editing area.
Zoom Box	<p>The window displays the enlarged image around the cursor.</p> <p>From the [View (V)] menu, select [Zoom Box] to display/hide the screen or to change the enlargement percentage.</p> <p>NOTE</p> <ul style="list-style-type: none">• Right-click the Zoom Box window to popup a menu. Using these menu commands, you can hide the window, or define the Zoom Box's zoom level.
Function Bar	<p>Lists the operations allocated to the function keys. Click the function bar to activate an allocated operation directly.</p> <p> " ■ Function Bar" (page 5-189)</p>

5.17.2 [New] Settings Guide

To create a new project, from the [Project (F)] menu, select [New (N)] or click . The [New Project File] dialog box appears.

■ **Set the display model.**



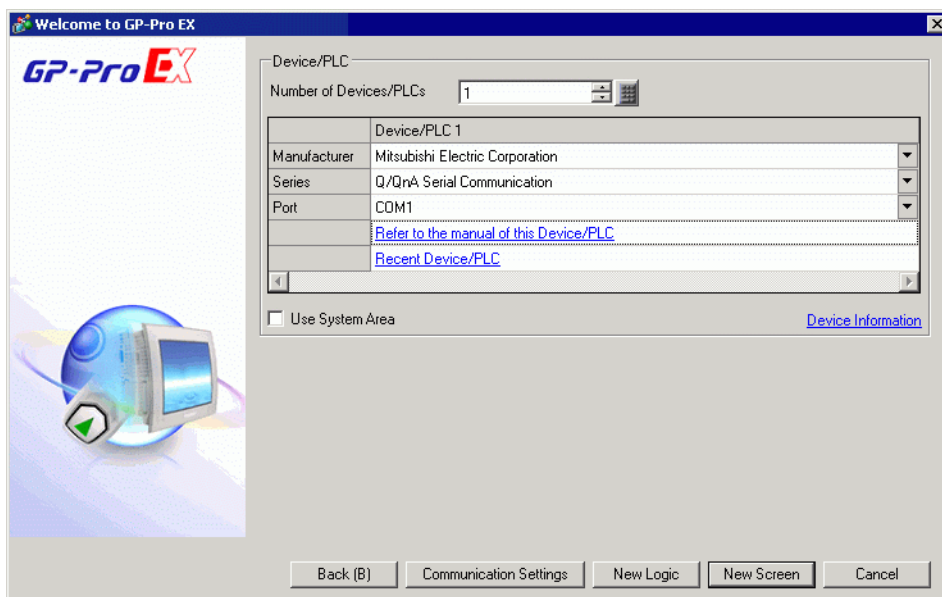
Setting	Description
Select Series	<p>Select the series of display types, [GP2000 Series], [GP3000 Series], [IPC Series (PC/AT)], [LT3000 Series], and [ST3000 Series].</p> <p>NOTE</p> <ul style="list-style-type: none"> If you select [GP2000 Series], the following dialog box appears. Click the icon to exit GP-Pro EX and start GP-PRO/PB3. GP-PRO/PB3 does not start if not installed. 
Display Unit	Set the Display Unit.
Series	Select the Series.
Model	Select one of the models from the series.

Continued

Setting	Description
Orientation	Select either the [Landscape] or [Portrait] display orientation. This does not display if [IPC Series (PC/AT)] or [LT3000 Series] is selected.
Screen Size	If the [IPC Series (PC/AT)] is selected, this sets the display size for the screen data.
Specifications	Displays the specifications of the display specified in [Display Unit].

■ Device/PLC Series Settings

Click [Next] after the setting the display and the following dialog box appears. Select the Device/PLC.



Setting	Description
Device/PLC	Set the device/PLC.
Manufacturer	Select the device/PLC maker name.
Series	Select the series for the device/PLC selected in [Maker].
Recent Device/PLC	Displays the maker name and series name of up to three devices/PLCs recently specified in the [New Project File] dialog box. Click each display to specify the [Maker] and [Series].
Use System Area	Designate whether or not to assign the GP internal system data area to the device/PLC. ☞ "5.17.6 [System Settings] Setting Guide ◆ System Area Settings" (page 5-174)
Refer to the manual of this Device/PLC	Displays the page in "GP-Pro EX Device Connection Manual" that describes the device/PLC selected.
Connection Method	Set the connection method of the GP and device/PLC.
Port	Select the port to allocate to the device/PLC from [COM1], [COM2], [Ethernet (UDP)], and [Ethernet (TCP)].
Device Information	Displays the top page of the "GP-Pro EX Device/PLC Connection Manual".

5.17.3 [Properties] Settings Guide

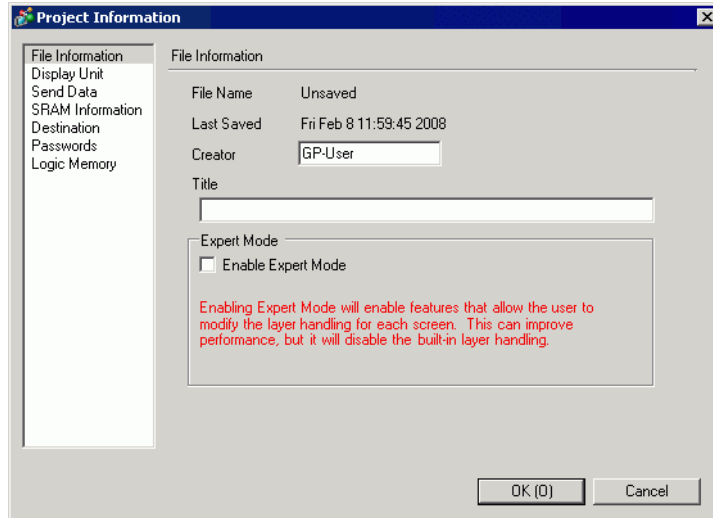
This section covers the Project Information dialog box. To open this dialog box, from the [Project (F)] menu, select [Information (I)].


■ Project Information

The Project Information dialog box displays the settings for communicating with the display unit.

◆ File Information

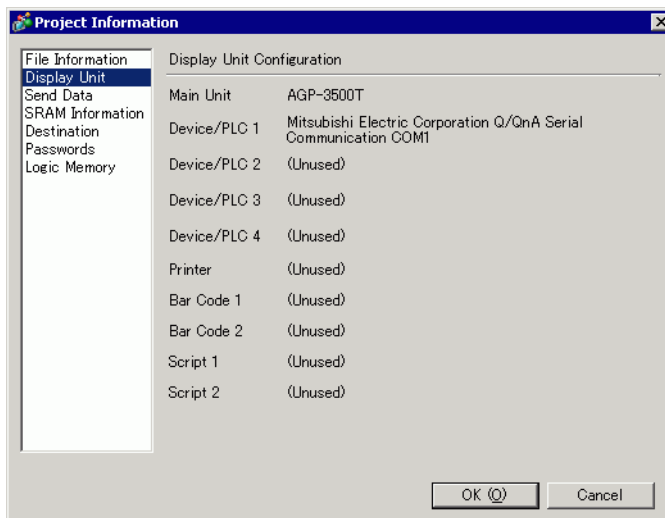
Displays information of a project file.



Setting	Description
File Name	Displays a project file name.
Last Saved	Displays the year, date, day of the week, and time when the last project file was saved. The format is [Day of the week], [Month], [Date], [Time hh:mm:ss], and [Year].
Creator	Set the name of the project file creator. You can input up to 30 characters.
Title	Set a comment for the project file. You can input up to 60 characters.
Enable Expert Mode	Select whether to enable Expert Mode.  "20.7.2 [Project Information] [File Information] [Expert Mode] Settings Guide" (page 20-47)

◆ Display Unit

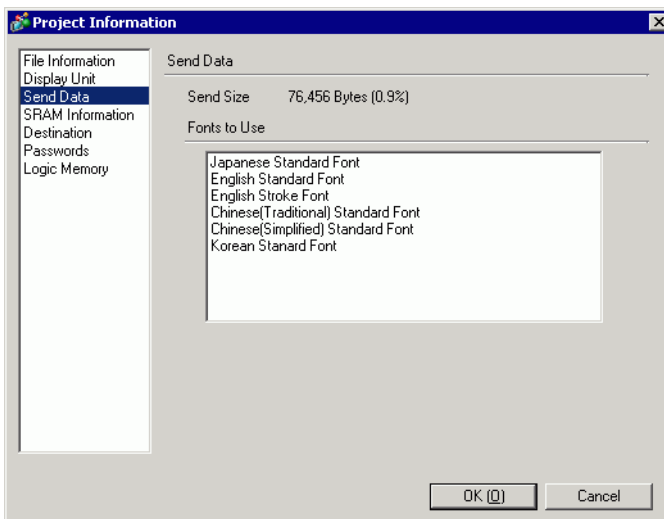
Displays the type or name of the specified devices/PLC and peripheral devices. Displays [Unused] for unused devices.




Setting	Description
Display Unit	Displays the display model name.
Device/PLC 1	Displays the specified device/PLC's series. "5.17.6 [System Settings] Setting Guide ■ [Device/PLC] Settings Guide" (page 5-181)
Device/PLC 2	
Device/PLC 3	
Device/PLC 4	
Printer	Displays the specified printer type. "34.6.2 System Settings [Printer] Settings Guide" (page 34-63)
Bar Code 1	Displays the specified bar code type. "16.4.1 [Input Equipment Settings] Settings Guide" (page 16-22)
Bar Code 2	
Script 1	Displays the specified script type. "5.17.6 [System Settings] Setting Guide ■ [Script I/O Settings] Settings Guide" (page 5-185)
Script 2	

◆ Send Data

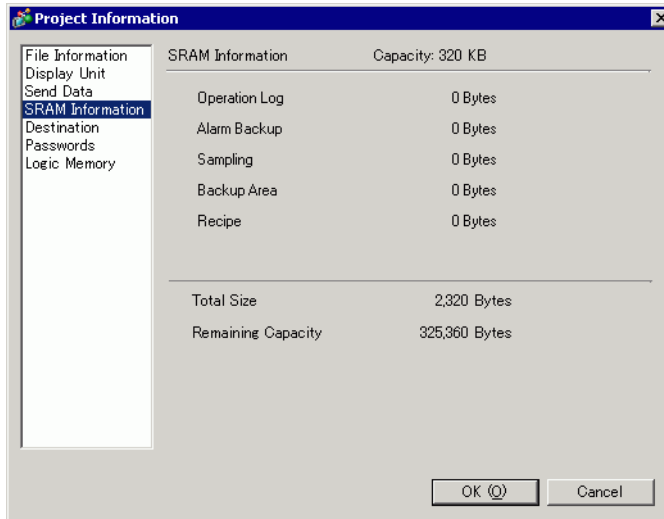
Displays information of the data to transfer to the display.



Setting	Description
Send Size	Displays the total size of the project data to send. The data exceeding the maximum size that the GP can accept is displayed with red characters.
Fonts to Use	Displays a list of fonts to send. [Font Used in Project] is specified in the [System Settings] window's [Font] page.  "6.4 [Font Settings] Settings Guide" (page 6-18)

◆ SRAM Information

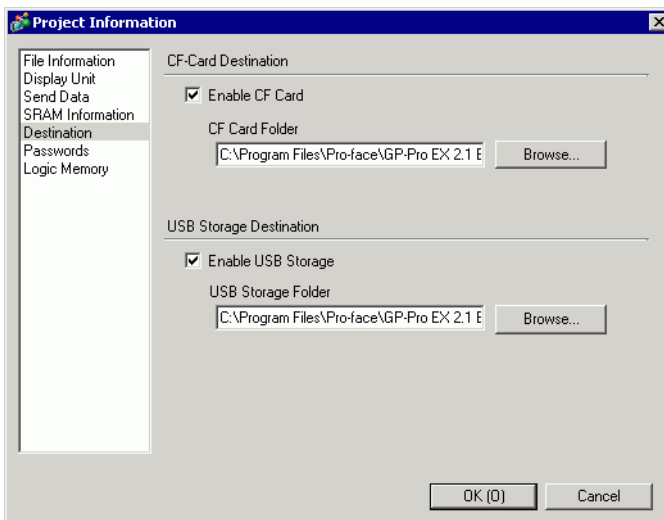
Displays information of GP's backup SRAM capacity.



Setting	Description
Capacity	Displays the specified display's backup SRAM capacity in KB.
Operation Log	Displays the SRAM size used for Operation Log.
Alarm Backup	Displays the SRAM size used for Alarm History.
Sampling	Displays the SRAM size used for Sampling.
Backup Area	Displays the SRAM size used for the GP internal device backup.
Recipes	Displays the SRAM size used for Recipe.
Total Size	Displays the total size used for the SRAM by the byte.
Remaining Capacity	Displays the remaining capacity by the byte. If the total size exceeds the capacity, the value is displayed with a minus.

◆ Destination

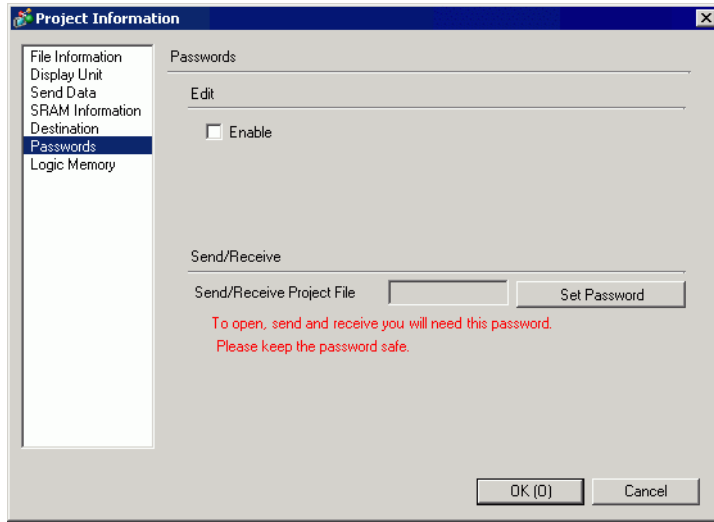
Specifies the location to save data you transfer to a CF Card and USB storage inserted to GP.




Setting	Description
Enable CF Card	Select whether or not to use a CF Card in a project.
CF Card Folder	Specifies the location to store data you save on the CF Card. Click [Browse...] to display the dialog box that designate the directory. In the initial settings, \Program Files\Pro-face\GP-Pro EX *.* (*.* show the version) \Database\ (folder with the same name as the project file) is specified.
Enable USB Storage	Select whether to use USB storage in the project.
USB Storage Folder	Specifies the location to store data you save in USB storage. Click [Browse...] to display the dialog box that designate the directory. In the initial settings, \Program Files\Pro-face\GP-Pro EX *.*(*.* shows the version) \Database\ USB is specified.

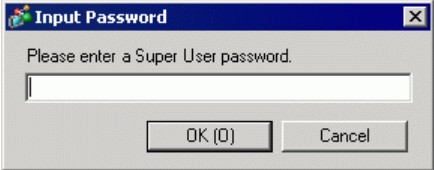
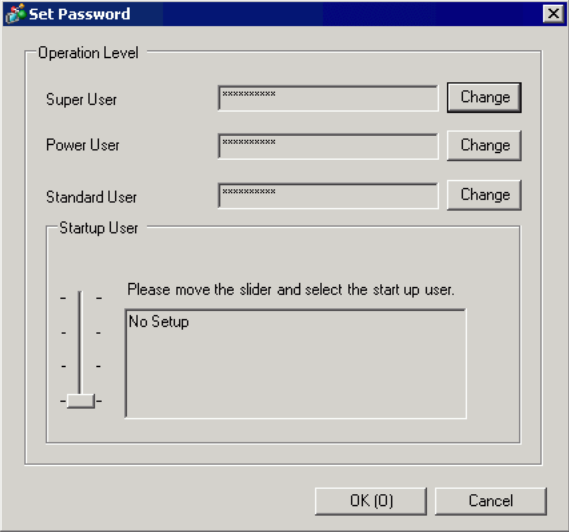

◆ Password

Set a password for editing or transferring a project file.

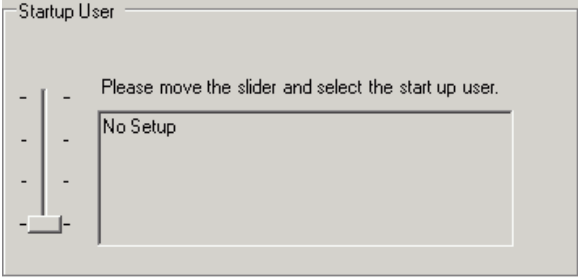



Setting	Description
Edit	Set a password to protect the project or lock part operations.
Enable	<p>Select this check box to display the following dialog box.</p>  <ul style="list-style-type: none"> • New Password You can define a password with up to 10 single-byte characters. • Confirm Password Confirm the password. <p>NOTE</p> <ul style="list-style-type: none"> • Super user rights are required to set up the password. • When the check box is cleared, the password settings are removed. You also need super user rights for clearing this check box.
Current User Level	<p>Displays the user level that can run operations without entering a password.</p> <p>In the [Set Password] dialog box, you can define the user level in the [Startup User] setting. This setting becomes the selected user level from the next time you open the project.</p>

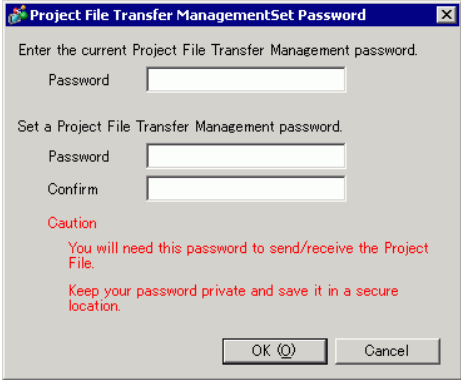
Continued

Setting	Description
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Edit</p> <p>Set Password</p>	<p>Click [Set Password] to display the following dialog box.</p>  <p>Enter the Super User password and click [OK]. Define the password for each user level.</p> 
<p>Operation Level</p>	<p>Set up or change passwords for each user level.</p>  <ul style="list-style-type: none"> • New Password You can define a password with up to 10 single-byte characters. • Confirm Password Confirm the password.

Continued

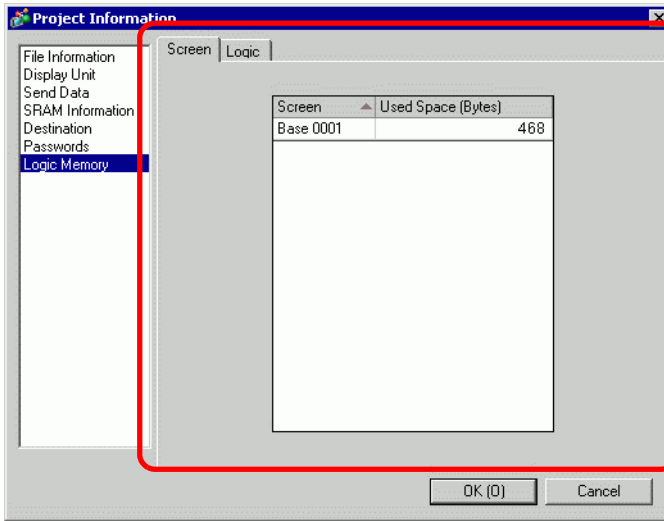
Setting		Description
Edit	Startup User	<p>You can omit password inputs for levels below the selected user level.</p>  <p>NOTE</p> <ul style="list-style-type: none"> • Move the slider to the user level and a description of that user level will be displayed.
	Delete All Passwords	In [Lock Password] dialog boxes, there is a setting to [Remember Password]. This button removes all memory of these passwords.
	Protect Project Standard User	<p>Displays the password dialog box when opening the project.</p> <p>NOTE</p> <ul style="list-style-type: none"> • When [Startup User] is not set up, the password you enter here is the password for all users. • If the [Startup User] is higher than the [Standard User], the project file opens without requiring a password.
Send/Receive	Set a password to Permit a project transfer.	
Send/Receive Project File	Send/Receive Project File	Displays a password for sending/receiving as "*****".
	Set Password	<p>Click this button to display the following dialog box.</p> 

Continued

Setting		Description
Send/Receive	Set Password	<p>If you click [Set Password] when a password is already defined, the following dialog box appears. Change or remove the password.</p> 
	Passwords	You can define a password with up to 24 single-byte characters.
	Confirm	<p>Confirm the password.</p> <p>NOTE</p> <ul style="list-style-type: none"> If you click [OK] with this field left blank, the password will not be set.

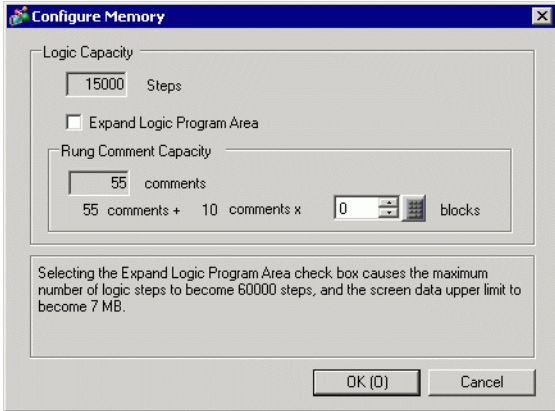
◆ **Logic Memory**

You can check the screen number's current memory usage, or the logic program's current logic capacity, symbol variable capacity, address points, and comment memory. You can change the proportion between the logic and the comment capacity depending on usage.

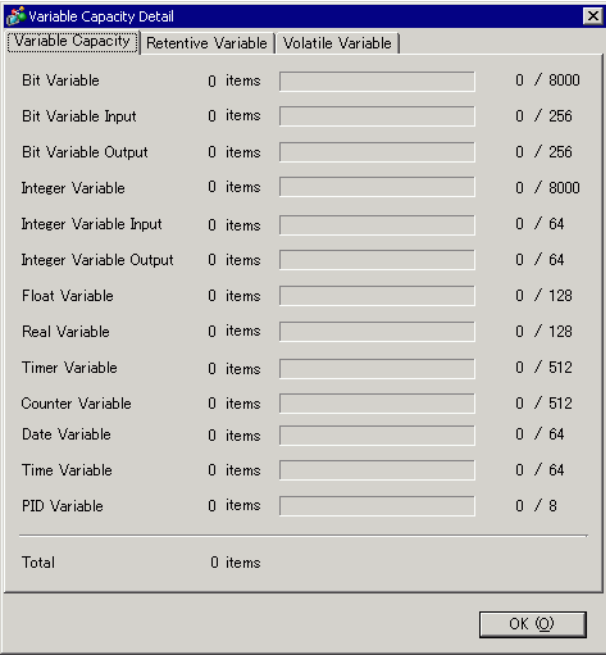
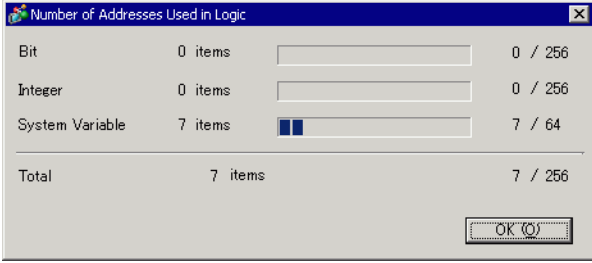


Setting	Description
Screen	Lists the screen number and the memory usage for each screen.
Screen	Displays the screen number that's used.
Usage capacity (bytes)	Displays the amount of memory used in the screen that corresponds to the screen number.
Logic	Displays the amount of memory used by the Logic Program item by item. <div style="text-align: center;"> </div>

Continued

Setting		Description
Logic	Configure Memory	<p>Click this button and the following dialog box appears.</p> 
	Logic Capacity	Displays the number of Steps that you can create.
	Expand Logic Program Area	You can expand the upper limit of the number of steps. However, since the screen data area is used to enable this expansion, the upper limit of the screen data area will decrease.
	Variable Comment Capacity	Sets the upper limit for the symbol variable comment memory, ranging from 0 to 15.
	Rung Comment Capacity	Sets the upper limit for the rung comment capacity, ranging from 0 to 15.
	Variable Capacity	Displays the number of symbol variables currently used and the total configurable number.

Continued

Setting		Description
Logic	Introduction	<p>Click this button and the following dialog box appears. You can check the number of symbol variables currently used and the possible configurable number, as well as the total number of symbol variables.</p> 
	Number of Addresses Used in Logic	<p>Displays the number of addresses currently used in the logic program and the possible configurable number.</p>
	Introduction	<p>Click this button and the following dialog box appears. You can check the current number used, the possible configurable number, as well as the total number of bit variables, integers, and system variables.</p> 
Comment Memory	<p>Displays the current number and configurable number of symbol variable comments and rung comments.</p>	

■ Destination Folder

Specifies the designation folder for the CF Card or the USB storage.

☞ " ◆ Destination" (page 5-108)

■ Protect Data

Set a password for editing or transferring a project file.

☞ " ◆ Password" (page 5-109)

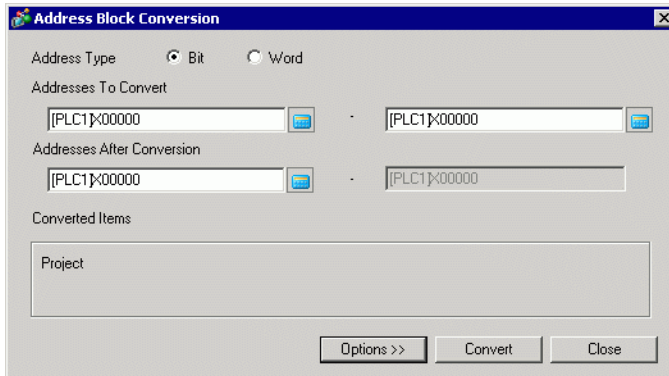
5.17.4 [Utility] Settings Guide


This section covers the Utilities. To open the utilities, from the [Project (F)] menu select [Utility (T)].

■ Address Block Conversion

Converts the sequential addresses specified in a project. There are two conversion methods: [Whole Project] converts the addresses in the whole project as a block, and [Individual Settings] converts the selected target screens or features.

◆ Whole Project



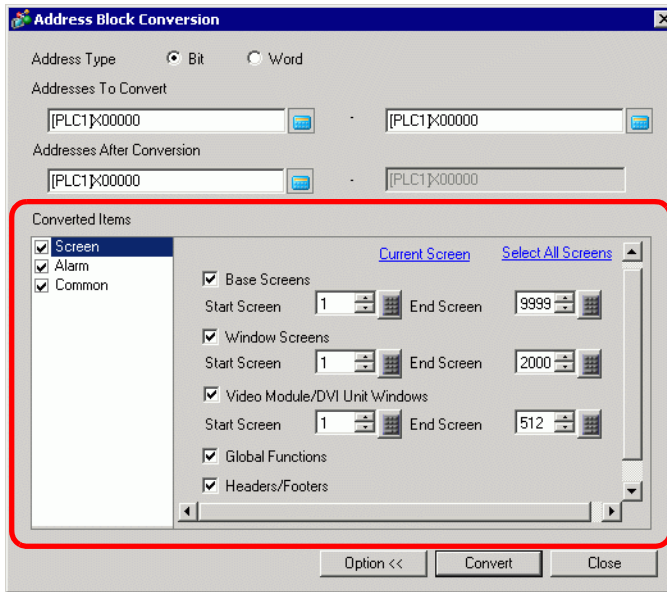
Setting	Description
Address Type	Select the address type to convert as [Bit] or [Word].
Address To Convert	Set the Start Address on the left and End Address on the right as the range of sequential addresses to be converted.
Address After Conversion	Select the Start Address after conversion.
Converted Items	Displays the target to be converted.
Whole Project	Display this when converting all the addresses in a project file.
Option	Goes to the mode that sets the selected target individually.  " ◆ Option" (page 5-117)

NOTE

- In the [Addresses to Convert] field, you cannot use addresses from different registers for the start and end addresses.
- If the total number of addresses (End Address - Start Address) before conversion is greater than the total number of addresses (End Address - Start Address) after conversion, the last device address is assigned to remaining addresses.

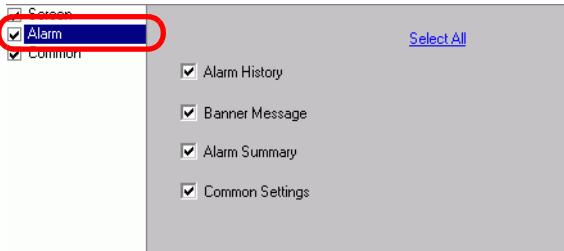
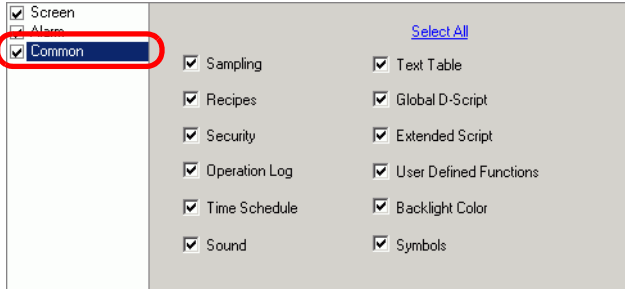
◆ Option

Sets the target conversion address screens individually and converts them.



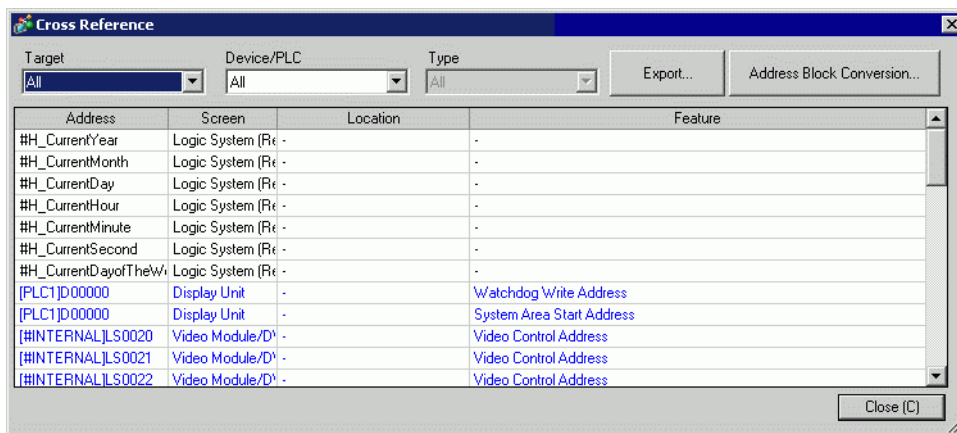
Setting	Description
Screen	Select the block of target screens to convert.
Current Edit Screen	Converts addresses as a block only for the screens that are currently being edited.
Select All Screens	Selects all the screens in one operation. Selects all the check boxes that are available when you select [Screen] in the [Converted Items] list.
Base Screen	Set whether or not to include Base Screens.
Start Screen	Set the start screen number of the Base Screens from 1 to 9999.
End Screen	Set the end screen number of the Base Screens from 1 to 9999.
Window Screen	Set whether or not to include Window Screens.
Start Screen	Set the start screen number of the Window Screens from 1 to 2000.
End Screen	Set the end screen number of the Window Screens from 1 to 2000.
Video Module/ DVI Unit Windows	Determines whether to include the Video Module/DVI Unit Window for Address Block Conversion.
Start Screen	Specifies the first Video Module/DVI Unit window number to be included in the conversion from 1 to 512.
End Screen	Specifies the last Video Module/DVI Unit window number to be included in the conversion from 1 to 512.
Global Functions	Set whether or not to include addresses used in Global Functions in the conversion.
Header/Footer	Set whether or not to include the addresses specified for Headers/Footers among the conversion.
Logic	Determines whether to include the logic screen in the conversion.

Continued

Setting	Description
Alarms	<p>Choose the alarm feature to include in the block conversion from [Alarm History], [Banner Message], [Alarm Summary] or [Common Settings].</p> 
Select All	<p>Run block conversion on all the alarm features. Select all the alarm check boxes available when [Alarm] is selected in the [Converted Items] list.</p>
Common Settings	<p>In [Common Settings], select the features to convert other than [Alarm] from [Sampling], [Recipe], [Security], [Operation Log], [Time Schedule], [Sound], [Text Table], [Global D-Script], [Extended Script], [User Defined Functions], [Backlight Color Settings] or [Symbol].</p> 
Select All	<p>Runs block conversion on all Common Settings except alarms. Selects all the check boxes that become available when [Common] is selected in the [Converted Items] list.</p>

■ Cross Reference

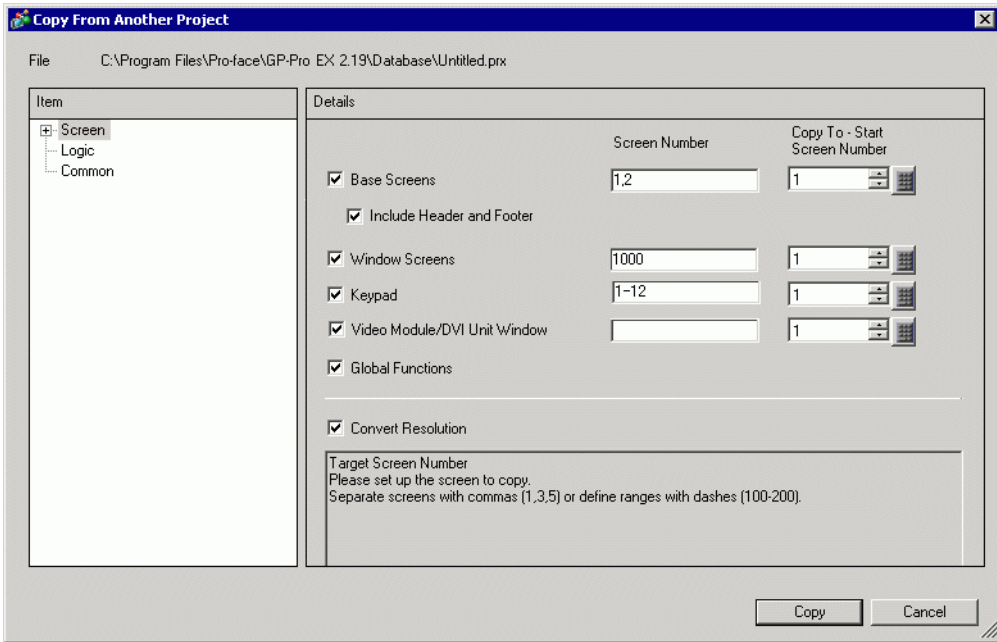
Displays the addresses used by screens and placed parts in a project.

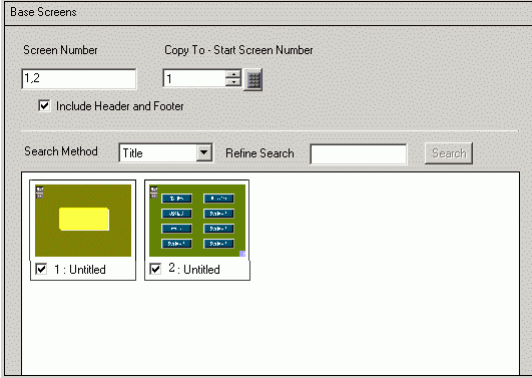


Setting	Description
Target	Choose the contents to display on the Cross Reference from [All], [Current Screen], [Base Screen], [Window Screen], [Header/Footer], [Logic], [I/O Screen] [Alarm], [Sampling], [Recipe], [Security], [Time Schedule], [Sound], [Text Table], [Global D-Script], [Extended Script], [User Defined Functions], [Operation Log], [Backlight Color Settings], [Video Modules/DVI Unit Window] or [System Settings].
Device/PLC	Select the contents to display on the Cross Reference from [All], [Symbol Variable], [PLC1] (device/PLC), [#INTERNAL] (internal device address), or [#MEMLINK] (only when using memory link).
Type	Select the address type to display from [All], [Bit Address], [Word Address], [Bit Variable], [Integer Variable], [Float Variable], [Real Variable], [Timer Variable], [Counter Variable], [Date Variable], [Time Variable], [PID Variable], [System Variable (Bit)], [System Variable (Integer)].
Export	Output the list of addresses to a file in the CSV or text format.
Address Block Conversion	Displays the [Address Block Conversion] dialog box. Converts the addresses specified in a project as a block. There are two conversion methods: [Whole Project], which converts the addresses in the whole project as a block, and [Individual Settings], which sets and converts the screens individually. " ■ Address Block Conversion" (page 5-116)
Address	Displays the address or symbol name in use.
Screen	Displays the screen numbers, Alarms, Common Settings' types in use.
Location	Displays the part ID, the address group, the block number, or line number associated with where the address is used.
Feature	Displays the usage of each address.

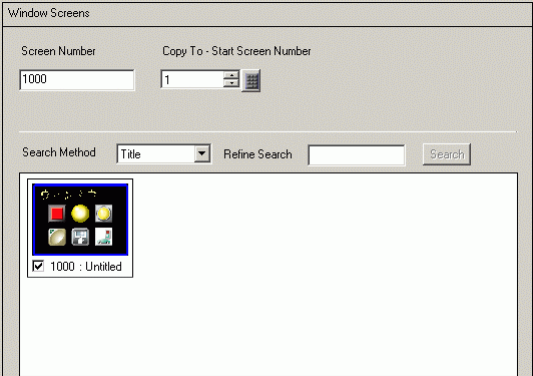
■ Copy from Another Project

Specifies another project file to copy necessary screens.

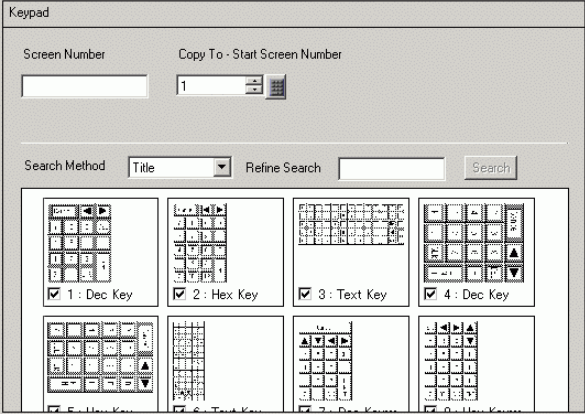
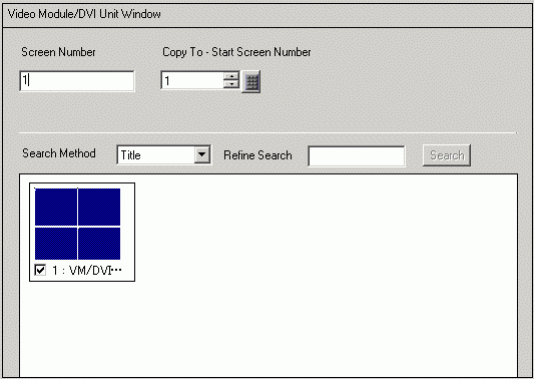


Setting	Description
File	Displays the copy-from file.
Screen	Defines which screens to copy. Expand [Screen] to show more screen details.
Base Screen	<p>Copies Base Screens from another project.</p> 
Screen Number	<p>Specifies which base screens to copy. Select the check box associated with each screen preview to add the screen ID to this field.</p> <p>NOTE</p> <ul style="list-style-type: none"> When the dialog box is displayed, all base screen numbers selected for the copy operation are listed here.
Copy-To Start Screen Number	Define which screen number to start copying the screens to, as a value from 1 to 9999.

Continued

Setting		Description
Screen	Base Screen	
	Include Header and Footer	Set whether or not to copy the header/footer in another project file.
	Search Method/ Refine Search	Select the screen search method from [Title] or [Screen Number]. In the [Refine Search] field, define what to search for, with up to 128 single or double-byte characters.
	Window Screen	<p>Copies Window Screens from another project.</p> 
	Screen Number	<p>Specifies which base screens to copy. Select the check box associated with each screen preview to add the screen ID to this field.</p> <p>NOTE</p> <ul style="list-style-type: none"> When the dialog box is displayed, all window screen numbers selected for the copy operation are listed here.
Copy-To Start Screen Number	Define which screen number to start copying the screens to, as a value from 1 to 2000.	
Search Method/ Refine Search	Select the screen search method from [Title] or [Screen Number]. In the [Refine Search] field, define what to search for, with up to 128 single or double-byte characters.	

Continued

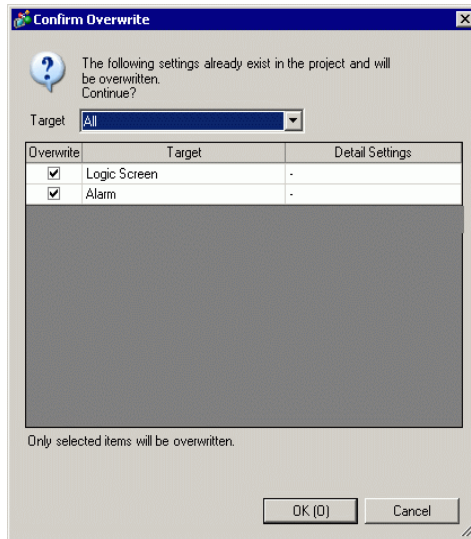
Setting		Description
Screen	Keypad	<p>Copies the keypad screen from another project.</p> 
	Screen Number	<p>Specifies which base screens to copy. Select the check box associated with each screen preview to add the screen ID to this field.</p> <p>NOTE</p> <ul style="list-style-type: none"> When the dialog box is displayed, all window screen numbers selected for the copy operation are listed here.
	Copy-To Start Screen Number	<p>Define which screen number to start copying the screens to, as a value from 1 to 8999.</p>
	Search Method/ Refine Search	<p>Select the screen search method from [Title] or [Screen Number]. Set the text to be search target up to 128 characters using single/double-byte characters.</p>
	Video Module/ DVI Unit Window	<p>Copies the Video Module/DVI unit window from another project.</p> 
Screen Number	<p>Specifies Video Module/DVI unit window number which base screens to copy. Select the check box associated with each screen preview to add the screen ID to this field.</p> <p>NOTE</p> <ul style="list-style-type: none"> When the dialog box is displayed, all Video Module/DVI unit window numbers selected for the copy operation are listed here. 	

Continued

Setting		Description
Screen	Video Module/DVI Unit Window	
	Copy-To Start Screen Number	Define which Video Module/DVI unit window number to start copying the screens to, as a value from 1 to 512.
	Search Method/ Refine Search	Select the screen search method from [Title] or [Screen Number]. Set the text to be search target up to 128 characters using single/double-byte characters.
Logic		Copy [Logic Screen] and [I/O Screen] from another project.
Common Settings		Copy [Alarm], [Sampling], [Global D-Script], [Extended Script], [User Defined Functions], and [Text] from another project.

Confirm Overwrite

When the copy-to destinations already exist in the project, you may need to confirm overwriting the data.

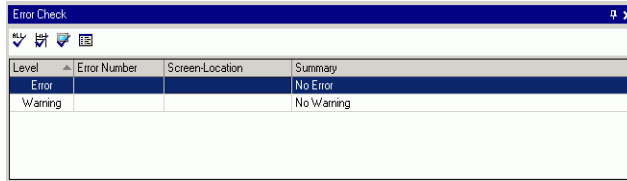


Setting	Description
Target	Filter the objects you want displayed on the list from [All], [Base Screen], [Window Screen], [Keypad], [Video Module/DVI unit window], [Logic Screen], [I/O Screen], [Alarm], [Sampling], [Text], [Global D Script], [Extended Script], [User Defined Functions].
Overwrite	Specify whether to overwrite selected objects.
Target	Display the item that already exists and may be overwritten.
Detail Settings	Display the screen number or screen title for the item that already exists and may be overwritten.

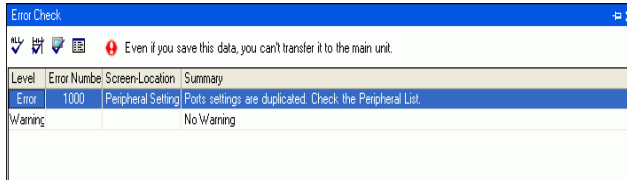
■ Error Check





Checks whether an error exists in the settings in a project.

No error




Error



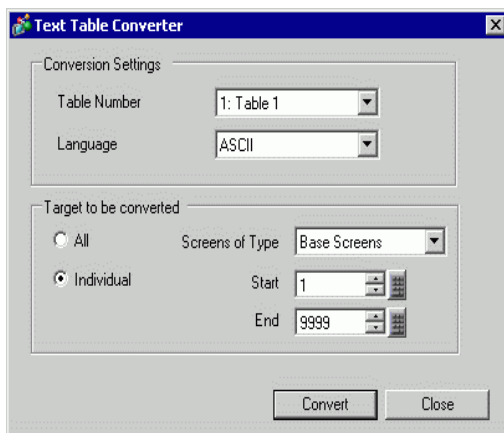
Setting		Description
Operation Icons	All 	Checks for errors in all settings.
	Logic only 	Checks for errors in logic screens only.
	Screen only 	Checks for errors in screens only.
	Settings 	Displays the [Error Check] under [Preferences] dialog box.
Level		Displays the level of error as either an [Error] or a [Warning].
Error Number		Displays the error number. For details about error numbers, refer to "Maintenance/Troubleshooting."
Screen Location		Displays the screen Number, part Number, or Row Number where the error occurred.
Description		Displays the error details.

NOTE

- Error checks are automatically performed when saving projects.
- When you click  on the [Error Check] window, display fixing of the window is disabled. The window displays as the [Error Check] tab on the [Function Bar]. Point the cursor to the tab to display the [Error Check] window. You can execute error checks while drawing without using a window.

■ Convert Text Table

Searches Text in the project and stores them in the Text Table.



Setting		Description
Conversion Settings	Table Number	Select a Table Number from 1-16 for the destination Text Table.
	Language	Select a language to display in the Text Table: [Japanese], [English], [Chinese (Traditional)], [Chinese (Simplified)], [Korean], [Cyrillic], or [Thai].
Target to be converted	All	All Screens are targets for conversion.
	File	The screens selected in [Screens of Type] are the targets to be converted.
	Screens of Type	Select a Target screen to be converted from [Base Screen], [Window Screen], [Keypad], [Header/Footer], [Text Screen] or [Alarm Message].
	Start/End	Specify a [Start] and an [End] number from 1 to 9999 for the screens to be converted. NOTE • The numbers are not specified if [Alarm Message] is selected for Screens of Type.

NOTE

- Text set in the following parts are stored in the Text Table.
[Alarm Message], [Text], Label of [Switch/Lamp], Messages registered by direct input from [Message Display], Item Names set for display from the [Alarm] part

5.17.5 [Work Space] Settings Guide

This section covers the Work Space settings. To open each Work Space, from the [View (V)] menu, point to [Work Space (W)] and select the Work Space to open.

■ System Settings

This window is used to configure system settings for a project file.



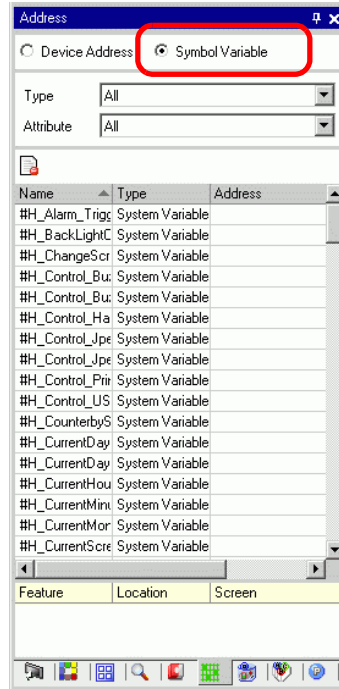
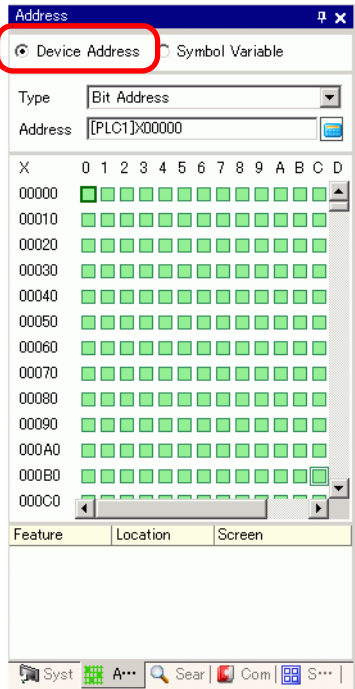
Setting	Description
Display	Configures the display settings.
Display Settings	Displays the display settings and specifications. ➔ " ■ [Display] Settings Guide" (page 5-145)
Display Unit	Configures detailed settings for the display unit. ➔ " ■ [Display Unit] Settings Guide" (page 5-147)
Logic Programs	Configures the logic feature settings. ➔ "29.14.1 [Logic Programs] Setting Guide" (page 29-158)
Video/Movie	Configures the settings for video play and movie recording. ➔ "27.9.1 [Video/Movie] Settings Guide" (page 27-75)
Font	Sets a font to use on the display. ➔ "6.4 [Font Settings] Settings Guide" (page 6-18)

Continued

Setting	Description
Peripheral Settings	Configure settings for each peripheral device.
Peripheral List	Displays a list of the specified peripheral devices. ☞ " ■ [Peripheral List] Settings Guide" (page 5-178)
Device/PLC	Configure settings for a device/PLC. ☞ " ■ [Device/PLC] Settings Guide" (page 5-181)
Printer	Configure settings to communicate with the printer. ☞ "34.6.2 System Settings [Printer] Settings Guide" (page 34-63)
Input Equipment	Configures the settings to communicate with the input device. ☞ "16.4.1 [Input Equipment Settings] Settings Guide" (page 16-22)
Script I/O Settings	Configure Script I/O Settings. ☞ "21.9.1 D-Script/Common [Global D-Script] Settings Guide" (page 21-54)
I/O Driver	Configures the I/O series settings. ☞ "30.2.1 I/O Screen Settings Guide" (page 30-8)
FTP Server	Registers FTP servers. ☞ "27.9.2 [FTP Server] Settings Guide" (page 27-95)
Modem	Configures the settings for the modem connected to the display unit. ☞ "33.10.2 [Modem] Settings Guide" (page 33-69)
Video Module/ DVI Unit	Configures the Video Module/DVI unit settings. ☞ "27.9.6 [Video Module/DVI Unit Settings] Settings Guide" (page 27-128)


■ Address Settings

Displays a map of the device/PLC addresses in use or a list of the symbol variables.



Setting	Description
Select Model	Select the target for a list from [Device Address] or [Symbol Variable].
Device Address	Displays a map of the device/PLC addresses used in a project.
Type	Select the address type to list. Depending on the [Register Variable] specified in the System Setting Window [Logic Program] page, the options vary. When the [Register Variable] is [Variable Format], select [Bit Address] or [Word Address] as the type. When the [Register Variable] is [Address Format], select [Bit Address (Bit Variable)], [Word Address (Integer Variable)], [Float Variable], [Real Variable], [Timer Variable], [Counter Variable], [Date Variable], [Time Variable], or [PID Variable] as the type.
Address	Select the address to display in the map area.
Map Area	Displays a map of addresses in use.

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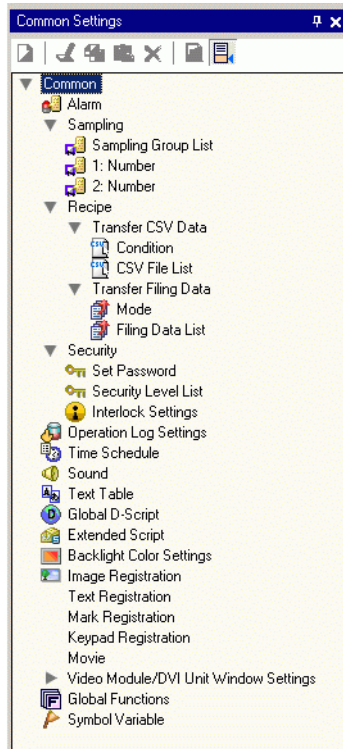
Setting	Description
Symbol Variable	Displays the symbol variables used in the project.
Type	<p>Select the address type to list. Depending on the [Register Variable] specified in the System Setting Window [Logic Program] page, the options vary.</p> <p>When the [Register Variable] is [Variable Format], select [All], [Bit Address], [Word Address], [Bit Variable], [Integer Variable], [Float Variable], [Real Variable], [Timer Variable], [Counter Variable], [Date Variable], [Time Variable], [PID Variable], [System Variable (Bit)], or [System Variable (Integer)] as the type.</p> <p>When the [Register Variable] is [Address Format], select from [All], [Bit Address], [Word Address], [System Variable (Bit)] or [System Variable (Integer)].</p>
Attribute	Select the symbol variable usage from [All], [In Use], or [Unused].
Display Unused Symbol Variables	<p>Symbol variables that are not used in the project can display in the [Unused Symbol Variables] dialog box, where you can delete them all at once.</p> <p> "29.13.7 Deleting all unused symbol variables" (page 29-142)</p>
Display Area	Displays a list of the symbol variables.
Address	Displays the addresses that are set up.
Status	<p>Displays the addresses state using letters. The meaning of each letter is as follows.</p> <p>H: Used on a screen, L: Used in Logic, K: Retentive type, I: Input, Q: Output.</p>
Feature	Displays the usage of each address.
ID Location	Displays the part ID, the address group, the block number, or line number associated with where the address is used.
Screen	Displays the screen numbers, Common Settings type.

NOTE

- Double-click either Feature, Location, or Screen and the selected screen for the parts appears in front.

■ Common Settings Window

Calls features common to a project file.



Setting		Description
Alarm		Displays the setting screen to register an alarm message. ☞ "19.10.1 Common (Alarm) Settings Guide" (page 19-69)
Sampling	Sampling Group List	Displays sampling setting details for each sampling group. ☞ "24.8.1 Common (Sampling) Settings Guide" (page 24-37)
Recipes Setting	Transfer CSV Data	Condition ☞ "25.10.1 Common (Recipe) Setup Guide n Transfer CSV Data (Condition)" (page 25-54)
		CSV File List ☞ "25.10.1 Common (Recipe) Setup Guide n Transferring CSV Data (CSV File List)" (page 25-59)
	Transfer Filing Data	Mode ☞ "25.10.1 Common (Recipe) Setup Guide n Transfer Filing Data (Action Settings)" (page 25-61)
		Filing Data List ☞ "25.10.1 Common (Recipe) Setup Guide n Transferring Filing Data (Filing Data List)" (page 25-65)

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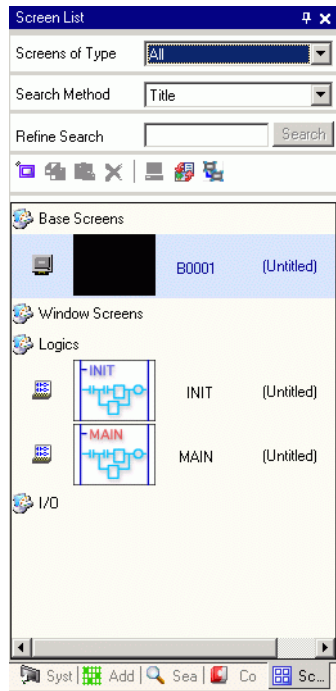
Setting		Description
Security	Set Password	Displays the screen to specify a security level and password. ☞ "22.10.1 Common (Security Settings) Settings Guide n Security Level List" (page 22-46)
	Security Level List	Displays a list of the screens with the security settings and the security level. ☞ "22.10.1 Common (Security Settings) Settings Guide n Password Settings" (page 22-40)
	Interlock Setting	Displays the screen to set Global Interlock. ☞ "22.10.1 Common (Security Settings) Settings Guide n Interlock Settings" (page 22-47)
Operation Log Settings		Sets action conditions for saving operation logs. ☞ "22.10.2 Common Settings (Operation Log Settings) Guide" (page 22-52)
Time Schedule		Displays a list of actions with the time schedule settings. ☞ "23.4 Common Time Schedule Settings Guide" (page 23-10)
Sound		Displays the screen to specify sound. ☞ "26.5.1 Common (Sound) Settings Guide" (page 26-13)
Text Table		Displays the text table to specify text. ☞ "17.9.3 Text Table Settings Guide" (page 17-62)
Global D-Script		Displays a list of existing global D-scripts. ☞ "21.9.1 D-Script/Common [Global D-Script] Settings Guide" (page 21-54)
Extended Script		Displays the screen to program extended scripts. ☞ "21.9.1 D-Script/Common [Global D-Script] Settings Guide" (page 21-54)
Backlight Color Settings		Configures the operation conditions to switch the backlight to red ☞ "5.17.8 [Common Settings] Setting Guide ■ Backlight Color Settings" (page 5-199)
Image Registration		Displays the [Image Registration] screen to register images. ☞ "9.5.1 Common (Image Registration) Settings Guide" (page 9-23)
Text Registration		Displays the screen to register text. ☞ "17.9.2 Common (Text Registration) Settings Guide" (page 17-61)
Mark Registration		Displays the screen to register marks. ☞ "8.13.4 Common Mark Registration Settings Guide" (page 8-102) NOTE <ul style="list-style-type: none"> • Select the mark that you want to use from the list, and you can drag and drop onto the drawing screen (Base Screen, Window Screen, Keypad Screen). To change a mark on the screen, drag-and-drop the mark you want overtop the mark on the screen.





Continued

Setting	Description
Keypad	<p>Displays the screen to edit a keypad.</p> <p>☞ "15.6.2 Common (Keypad Registration) Settings Guide" (page 15-34)</p> <p>NOTE</p> <ul style="list-style-type: none"> • Select the keypad that you want to use from the list, and you can drag and drop onto the drawing screen (Base Screen, Window Screen). To change a keypad, select the keypad you want and drag and drop it onto the keypad on the screen.
Movie	<p>Displays the [Movie] screen for creating a movie list file.</p> <p>☞ "27.9.3 Common [Movie] Settings Guide" (page 27-97)</p>
Video Module/DVI Unit Window Settings	<p>Displays the screen to create the Video Module/DVI unit window.</p> <p>☞ "27.9.5 Common [Video Module/DVI Unit Window Settings] Settings Guide" (page 27-119)</p> <p>NOTE</p> <ul style="list-style-type: none"> • Select the VM/DVI Unit Window that you want to use from the list, and you can drag and drop onto the Base Screen. To change a VM/DVI Unit Window, select the VM/DVI Unit Window you want and drag and drop on the screen's VM/DVI Unit Window.
Symbol Variable Settings	<p>Displays a screen to register symbols.</p> <p>☞ "5.9.2 Setup Procedure ■ Registering the [Symbol Variable]" (page 5-60)</p> <p>☞ "29.3 Addresses used in the logic program" (page 29-8)</p>


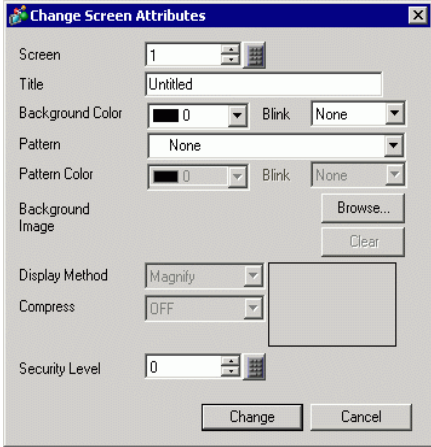

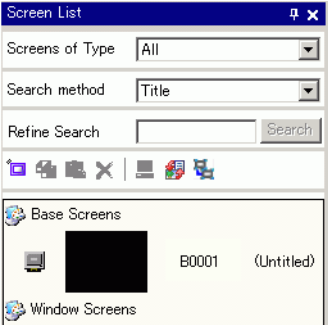
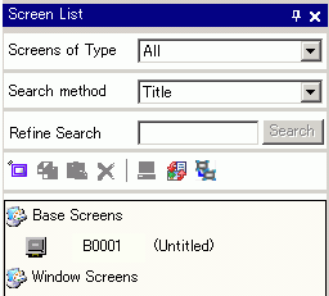

■ **Screen List**

Displays a list of existing Base Screens or Window Screens.



Setting		Description
Screens of Type		Select the screens to list from [All], [Base Screen], [Window Screen], [Logic], or [I/O Screen].
Search Method		Select the screen search method from [Screen] or [Title].
Refine Search		Enter your search term, up to 128 characters.
Operation Icons	New Screen 	Displays the [New Screen] dialog box.
	Copy 	Copies the selected screen.
	Paste 	Pastes the copied screen on the Screen List.
	Delete 	Deletes the selected screen from the project.

Continued

Setting		Description
Operation Icons	<p>Change Attribute </p>	<p>The following dialog box appears. You can change the screen number, title, and color.</p> 
	<p>Change Display Unit Mode </p>	<p>Changes the screen list to show or not show a thumbnail preview of the screen.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p><Reduced Screen Display></p>  </div> <div style="font-size: 2em;">↔</div> <div style="text-align: center;"> <p><List Display></p>  </div> </div>
Nesting 	Displays the screens hierarchically.	
Screen List	Displays a list of screens existing in a project. Double-click the screen row you want to view and the screen is displayed in the right editing area. You can also select a screen and copy or delete it.	


NOTE

- You can drag and drop Base screens in the [Screen List] onto the screen drawing area of Window screens, keypad screens, or other Base screens. You can change a previously placed Base screen by dragging another Base screen overtop of it. You can drag and drop Window screens only onto Base screens.

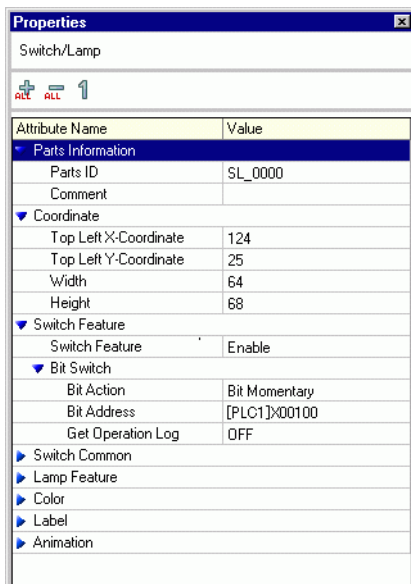
■ Properties

Displays the selected part or screen attributes/settings. Using this window, you can check the attributes or change the settings.

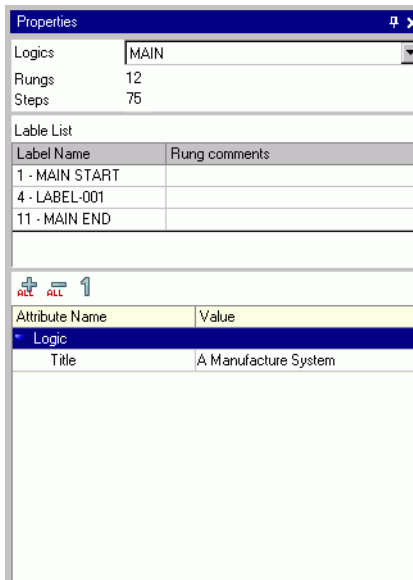
NOTE

- Not all of the setting information for the selected part will be displayed in this window.
- Attributes and settings for parts with fixed pins  do not display. For more details on the fixed pins, please refer to the following.
 ☞ "8.4.13 Protecting Objects That You Do Not Want to Edit" (page 8-35)

When Creating a Screen






When Creating Logic



Setting	Description
Part Name Display Area (When creating a screen)	The name of the selected part or screen is displayed. If multiple parts are selected, the number of selected parts is displayed.
Part Name Display Area (When creating logic)	For more information about creating a logic program using the [Logic Program Window], refer to "29.13.5 Using Reference Features to Search Logic Programs" (page 29-129).
Logic	When creating a [MAIN], [INIT], or subroutine screen, select the logic screen from [SUB-01] to [SUB-32].
Total Number of Rows	Displays the total number of rows in the logic program.
Total Number of Steps	Displays the total number of Steps in the logic program.
Label List	Displays a list of the labels in the logic program.

Continued

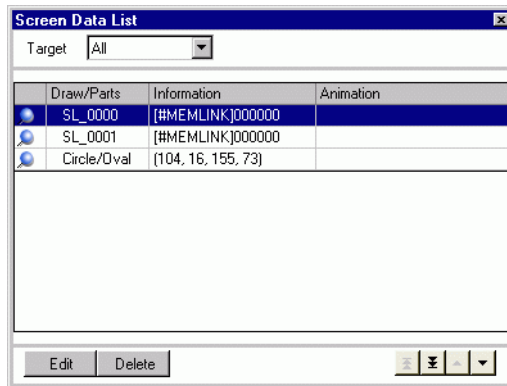
Setting	Description
Button Area	Opens and closes the attributes list.
Expand All 	Expands and displays all categories.
Collapse All 	Reduces and hides all categories.
Expand to 1st Level 	Expands and displays only top level categories.
Attribute Display/ Setting Area	Displays the setting content for each attribute. You can change the attributes in this list.

■ Screen Data List Window

Displays a list of the Parts and Draw on the screen.




NOTE

- The following describes the relationship between the processing order of parts and the display order in the [Screen Data List].
- The processing order of parts is the same as the order when the [Screen Data List] window's [Target] is set to [Parts]. When a switch is set up with multiple operations, the processing order is the same as in its Multifunction List.
- The timing between when a switch is touched and the actual process of the part on the display screen may not be completely accurate. Detecting when a switch turns ON may be delayed, causing a delay in the part operation.
- Only for the first time, right after a change screen operation, processing is done using the [Screen Data List] display order for [Target] = [All].
- Drawings on a screen are processed one time when the screen is first displayed, in the order of the [Screen Data List] when [Target] = [Draw]. From the second time on, only parts are processed. As a result, if an image changes after a part operation, the part is updated again and displayed in front of the drawing.



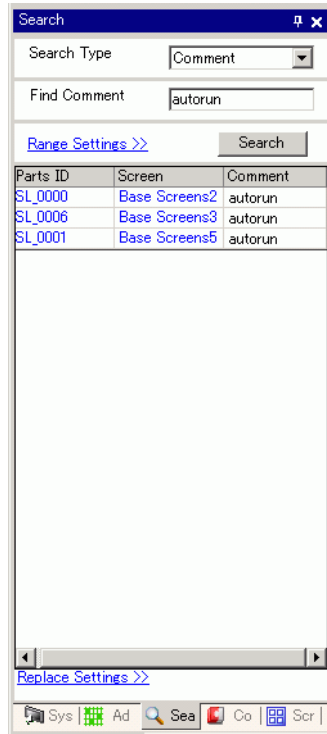
Setting	Description
Target	Select the targets to display in the list from [All], [Draw], or [Parts].
Target Assistance	Select the type of targets to display in the list when the [Target] is [Draw] or [Parts].

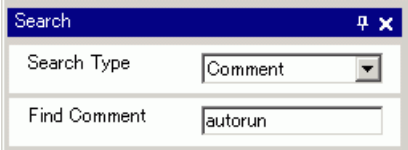
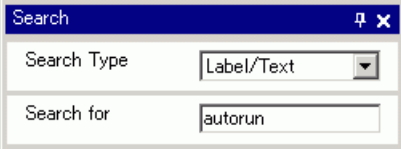
Continued

Setting	Description								
Display List <table border="1" data-bbox="149 345 375 826"> <tr> <td data-bbox="149 345 375 452">Draw/Parts</td> <td data-bbox="375 345 1252 452">Displays the Draw type when the [Target] is [Draw] or the Part ID number when the [Target] is [Parts]. Displays "Group Object 1" for a grouped target, and displays "D-Script" when [D-Script] is selected.</td> </tr> <tr> <td data-bbox="149 452 375 596">Information</td> <td data-bbox="375 452 1252 596">Displays the coordinate when the [Target] is [Draw] or all the Parts' addresses when the [Target] is [Parts]. Displays the ID number and comment when [D-Script] is selected or the coordinate and all the addresses in a group when Group Object is selected.</td> </tr> <tr> <td data-bbox="149 596 375 703">Animation</td> <td data-bbox="375 596 1252 703">Icon for the selected animation feature is displayed. For more details on the animation feature, refer to: ☞ "20.7.1 [Animation Settings] Settings Guide" (page 20-22)</td> </tr> <tr> <td data-bbox="149 703 375 826">Show Fixed Pins</td> <td data-bbox="375 703 1252 826">Shows whether or not the part or drawing is fixed. For more details on the fixed pins , see ☞ "8.4.13 Protecting Objects That You Do Not Want to Edit" (page 8-35)</td> </tr> </table>	Draw/Parts	Displays the Draw type when the [Target] is [Draw] or the Part ID number when the [Target] is [Parts]. Displays "Group Object 1" for a grouped target, and displays "D-Script" when [D-Script] is selected.	Information	Displays the coordinate when the [Target] is [Draw] or all the Parts' addresses when the [Target] is [Parts]. Displays the ID number and comment when [D-Script] is selected or the coordinate and all the addresses in a group when Group Object is selected.	Animation	Icon for the selected animation feature is displayed. For more details on the animation feature, refer to: ☞ "20.7.1 [Animation Settings] Settings Guide" (page 20-22)	Show Fixed Pins	Shows whether or not the part or drawing is fixed. For more details on the fixed pins  , see ☞ "8.4.13 Protecting Objects That You Do Not Want to Edit" (page 8-35)	Displays a list of the parts and drawings on the screen. Double-click a row to open the corresponding settings dialog box. Lines where hide (Grey) is set in the display navigator operation can be displayed by clicking it. For more details on the Display Navigator, refer to: ☞ "8.13.3 Preferences (Screen Edit Style) Setup Guide n Display" (page 8-100)
Draw/Parts	Displays the Draw type when the [Target] is [Draw] or the Part ID number when the [Target] is [Parts]. Displays "Group Object 1" for a grouped target, and displays "D-Script" when [D-Script] is selected.								
Information	Displays the coordinate when the [Target] is [Draw] or all the Parts' addresses when the [Target] is [Parts]. Displays the ID number and comment when [D-Script] is selected or the coordinate and all the addresses in a group when Group Object is selected.								
Animation	Icon for the selected animation feature is displayed. For more details on the animation feature, refer to: ☞ "20.7.1 [Animation Settings] Settings Guide" (page 20-22)								
Show Fixed Pins	Shows whether or not the part or drawing is fixed. For more details on the fixed pins  , see ☞ "8.4.13 Protecting Objects That You Do Not Want to Edit" (page 8-35)								
Edit	Displays the setting dialog box for the Part/Draw selected on the display list.								
Delete	Deletes the Part/Draw selected on the display list.								
To Top/Move Up	Moves the item selected on the display list to Top/Up.								
To Bottom/Move Down	Moves the item selected on the display list to Bottom/Down.								

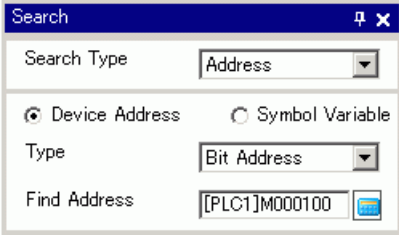
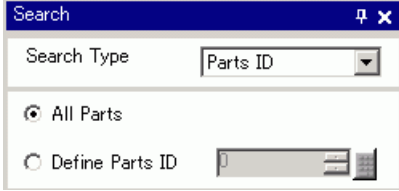

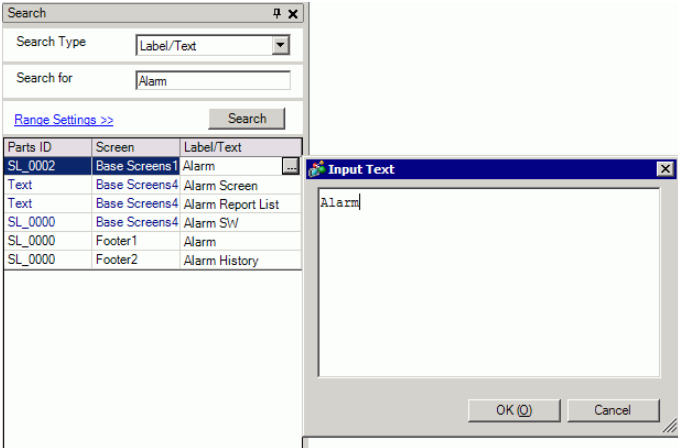
■ [Search]

Searches all screens in the project file for the parts that meet the specified conditions. Based on the search results, you can change the attributes.

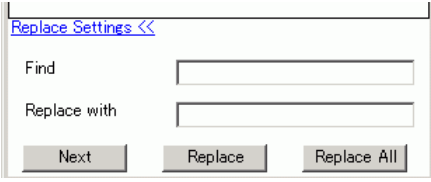


Setting	Description
Search Type	Select the search method from [Comment], [Label/Text], [Address], or [Parts ID].
Comment	Searches for the text entered in the parts' [Comment]. In [Find Comment], enter the text you wish to find. 
Label/Text	Searches for the parts' [Label] or Drawing text. In [Search for], enter the text you wish to find. 

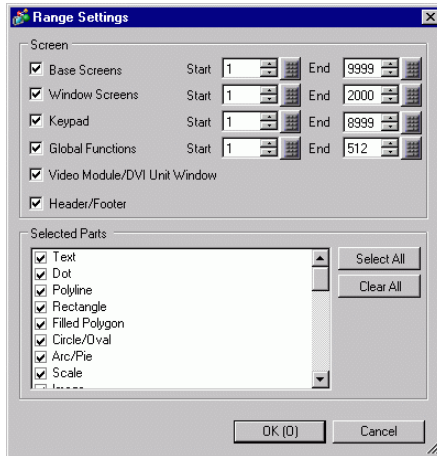
Continued

Setting		Description																					
Search Type	Address	<p>Searches for the address used in the parts. Select [Device Address] or [Symbol Variable]. If you select [Device Address], enter [Type] and [Find Address]. If you select [Symbol Variable], enter [Find Address] only.</p> 																					
	Part ID	<p>Searches for the Part ID. Select [All Parts] or [Define Part ID (No. only)].</p> 																					
Range Settings		<p>Click to display a dialog box to specify the search area.  " ♦ Range Settings Dialog Box" (page 5-141)</p>																					
Search Button		Click to start the search. During the search, the [Stop] button will appear.																					
Search Result		Click the search results to call the screen where the part is used. The screen shows the selected parts. Double-click the search results to display the parts setting dialog box.																					
Part ID		Displays the parts numbers found.																					
Screen		Displays the screen where the found parts are placed.																					
Comment or Label/Text or Address		<p>According to the search type specified, either comment/label/text/address is displayed. You can change the comment/label/text/address directly on the screen.</p>  <table border="1" data-bbox="450 1348 751 1489"> <thead> <tr> <th>Parts ID</th> <th>Screen</th> <th>Label/Text</th> </tr> </thead> <tbody> <tr> <td>SL_0002</td> <td>Base Screens1</td> <td>Alarm</td> </tr> <tr> <td>Text</td> <td>Base Screens4</td> <td>Alarm Screen</td> </tr> <tr> <td>Text</td> <td>Base Screens4</td> <td>Alarm Report List</td> </tr> <tr> <td>SL_0000</td> <td>Base Screens4</td> <td>Alarm SIV</td> </tr> <tr> <td>SL_0000</td> <td>Footer1</td> <td>Alarm</td> </tr> <tr> <td>SL_0000</td> <td>Footer2</td> <td>Alarm History</td> </tr> </tbody> </table>	Parts ID	Screen	Label/Text	SL_0002	Base Screens1	Alarm	Text	Base Screens4	Alarm Screen	Text	Base Screens4	Alarm Report List	SL_0000	Base Screens4	Alarm SIV	SL_0000	Footer1	Alarm	SL_0000	Footer2	Alarm History
Parts ID	Screen	Label/Text																					
SL_0002	Base Screens1	Alarm																					
Text	Base Screens4	Alarm Screen																					
Text	Base Screens4	Alarm Report List																					
SL_0000	Base Screens4	Alarm SIV																					
SL_0000	Footer1	Alarm																					
SL_0000	Footer2	Alarm History																					

Continued

Setting	Description
Replace Settings <<	<p>Click to display the following items. You can change the specified comment/label/text/address.</p> 
Find	Enter the text you wish to replace.
Replace with	Enter the new text you want to use.
Next	Searches the replace target in the current search result.
Replace	Replaces the items selected in the search results.
Replace all	Replaces all the items selected in the search result.

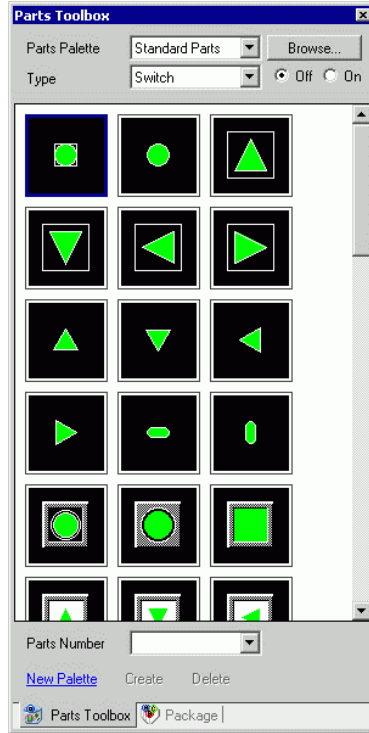
◆ Range Settings Dialog Box







Setting	Description
Base Screen	Specifies whether to search the base screen as well as the search range from 1 to 9999.
Window Screens	Specifies whether to search the window screen as well as the search range from 1 to 2000.
Keypad	Specifies whether to search the keypad screens as well as the search range from 1 to 8999.
Video Module Unit Window	Specifies whether to include Video Module/DVI Unit Window among search targets and specifies search area from 1 to 512.
Header/Footer	Specifies whether to search the header/footer.
Specify the parts	Select the type of parts you want to find.
Select All	Searches for all parts.
Clear All	Clears all the parts selected for the search.

■ Parts Toolbox

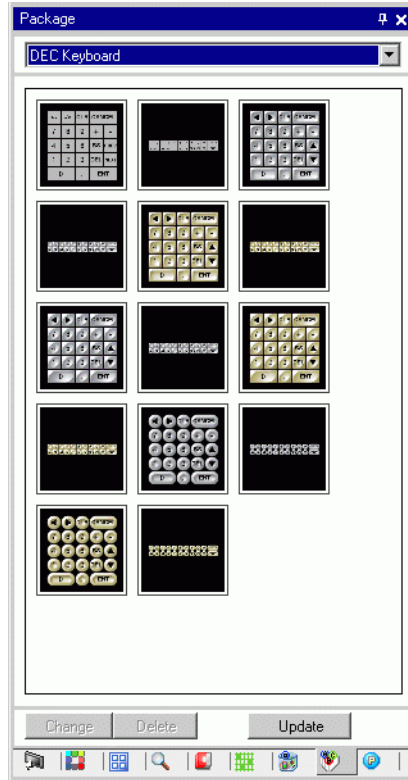
Lists the registered part shapes. This allows you to select the part shapes you want to use and then drag and drop the parts to the screen editor. When you select the [Copy Part Shape] from the right-click menu of the mouse, you can paste the copied shape to the parts on the screen editor.



Setting	Description
Parts Palette	<p>When you click  to the right or [Browse] it displays the Parts Palette. There are parts with 65536, 256, or 64 colors. Select a parts palette according to the number of colors on your model.</p> <p>NOTE</p> <ul style="list-style-type: none"> Depending on the shape, you may not be able to change the color.
Type	<p>Select a parts type. The type that displays depends on the palette selected from [Parts Palette].</p> <p>NOTE</p> <ul style="list-style-type: none"> When selecting [Switch], [Lamp] or [Key], the changeover switch of [On] (State 1) and [Off] (State 0) displays.
Parts Number	<p>Displays the Parts Numbers registered in the parts.  Click and select a parts number from the list to select the parts on the display screen.</p>
New Palette	<p>Creates a new palette to register images of the parts.</p> <p> "8.6.2 Creating Your Own Parts" (page 8-50)</p>
Create	<p>Register images of the parts in the [Register Part] dialog box for each state.</p> <p> "8.6.2 Creating Your Own Parts" (page 8-50)</p>
Delete	<p>Deletes images of the parts registered in the created palette.</p>

■ Package

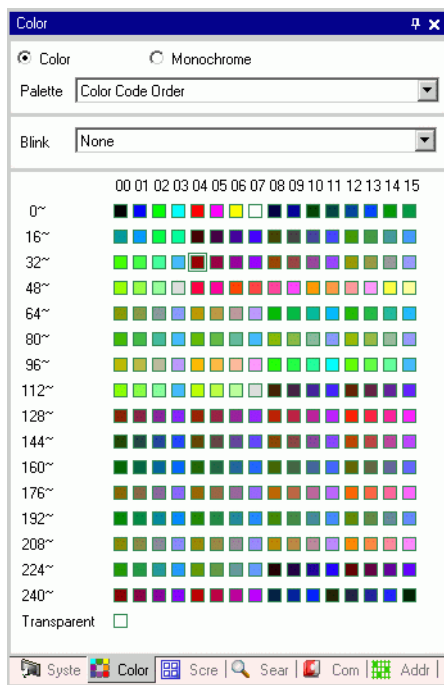
Lists the pictures of the registered packages. This allows you to select the pictures you want to use and then drag and drop the pictures onto the screen editor.



Setting	Description
Select Package	Click ▼ to display a different registered package from the [Package List]. For more details regarding the [Package List], please refer to "8.13.2 Package List Setup Guide" (page 8-95). NOTE <ul style="list-style-type: none"> Point the cursor to the picture on the display screen. Zoom Display and the Parts Name of the selected picture display in a pop-up window.
Change/Delete	Changes the names or deletes the parts you select. This can only be changed when the displayed package is the user or external package.

■ Color Settings

You can directly drag and drop the color from the color palette to the parts on the screen editor to change a color attribute.



Setting	Description
Color/ Monochrome	Select the color or monochrome palette. If you select the monochrome model in the display, you cannot select [Color].
Palette	Select the type of palette to display from [Color Code Order] and [Hue Order].
Blink	Select one of the following Blink types: [None], [Medium], [Fast], or [Slow]. NOTE <ul style="list-style-type: none"> When Blink is set to Disable in [Display Unit] [Display Settings], the Blink option is hidden.
Color Select	The list of displayed colors depends on the type of [Palette]. ☞ "8.5.1 Setting Colors n Types of Palettes" (page 8-41)

■ Comment List Window

☞ "29.14.2 [Work Space] Settings Guide n Comment List" (page 29-160)

■ Watch List Window

☞ "29.14.2 [Work Space] Settings Guide n Watch List" (page 29-165)

■ PID Monitor

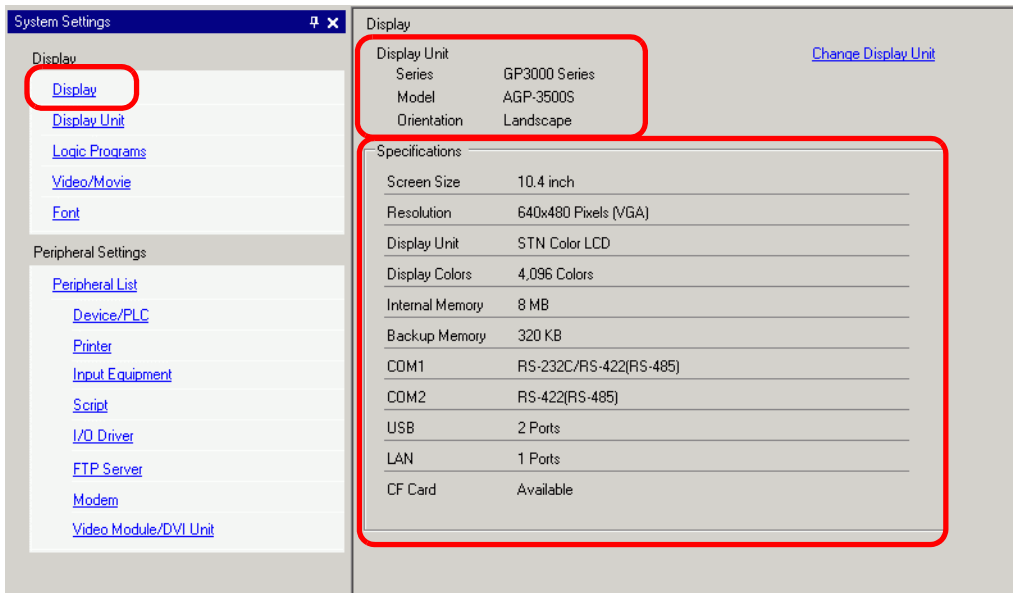
☞ "29.14.2 [Work Space] Settings Guide n PID Monitor" (page 29-161)

5.17.6 [System Settings] Setting Guide

This section reviews the information in the [System Settings].

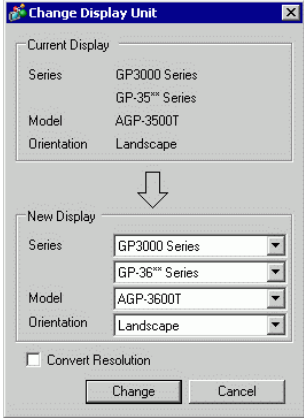
■ [Display] Settings Guide

Displays the specified display unit specifications.



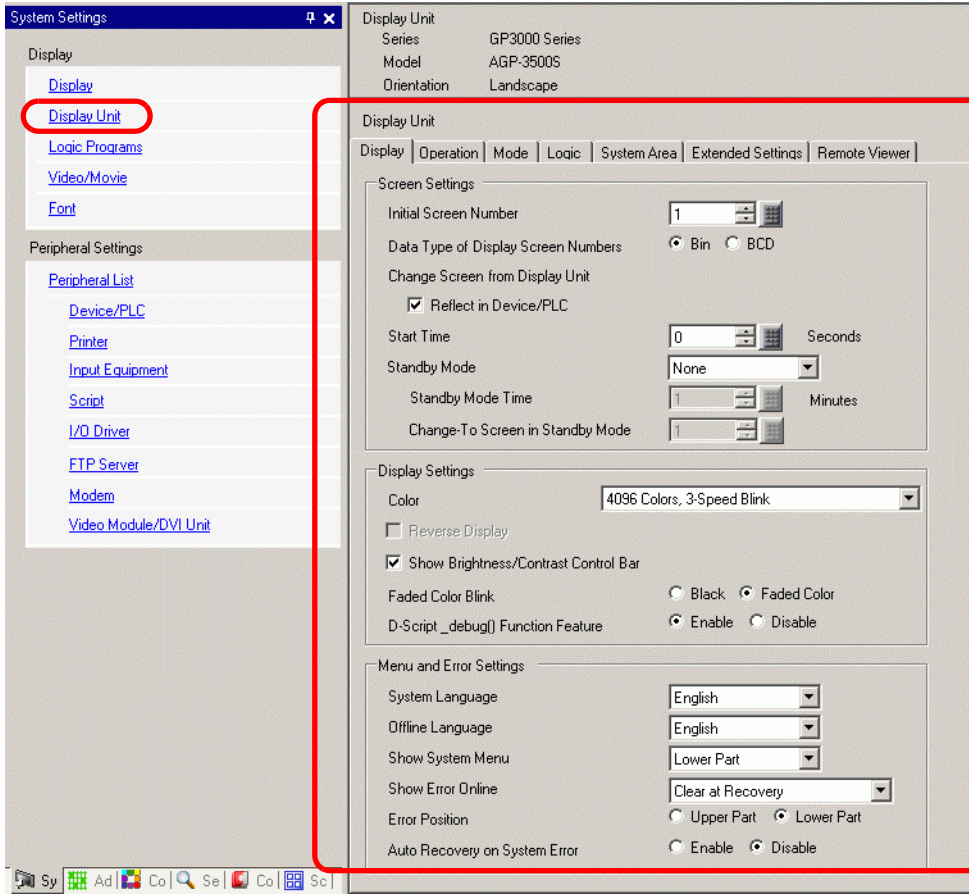
Setting	Description
Display Unit	Displays the display unit model number. NOTE • Commonly displayed on all the screens called from the System Settings.
Series	Displays the series name of a display unit.
Model	Displays the model name that supports the display unit series.
Orientation	Displays the display unit installation method with [Landscape] or [Portrait].
Specifications	Displays the specifications of the display unit specified in [Display Unit].

Continued

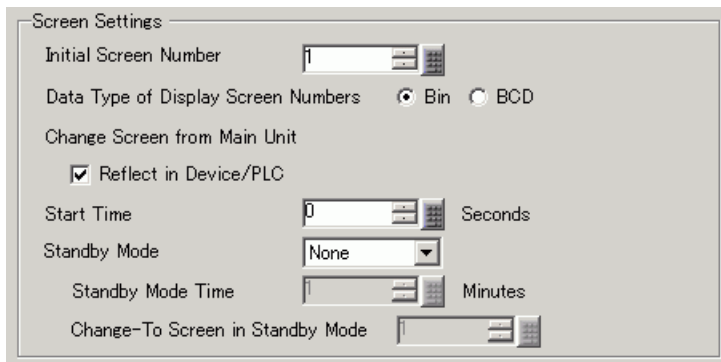
Setting	Description
Change Display Unit	<p>The following dialog box appears. Change the display unit model to be used for the project file.</p> 
Current Display	Displays the series name, model name and installation method of the currently specified display unit.
Convert-To Display	Specifies the [Series], [Model] and [Orientation] of the display unit that you're changing. If you select [IPC Series (PC/AT)], select [Screen Size] instead of [Orientation].
Convert Resolution	When the resolution differs before and after conversion, specify whether to adjust the resolution automatically. If you convert the resolution, the part size, position, and the text size are adjusted automatically according to the display resolution. Some scale magnification may not convert properly due to text size and resolution limitations.

■ [Display Unit] Settings Guide

◆ Display Settings

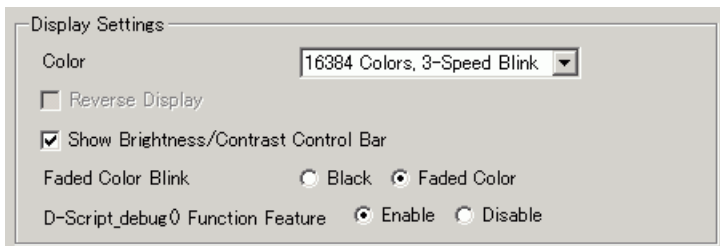


- Screen Settings



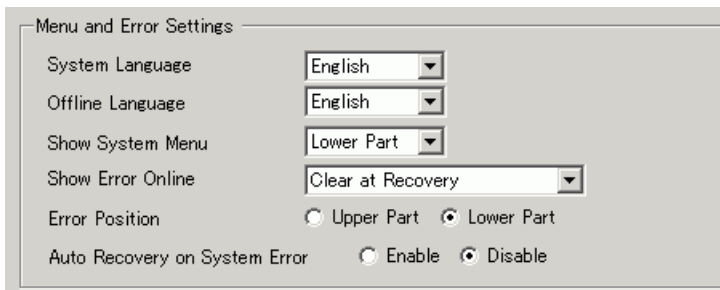
Setting	Description
Initial Screen	Set the number of the screen that to appear at startup. ☞ "11.3 Choosing the Screen to Display when the GP Turns On" (page 11-7) NOTE <ul style="list-style-type: none"> Set the screen number from 1 to 9999 when the [Data Type of Display Screen Numbers] is [Bin], and from 1 to 7999 for [BCD].
Data Type of Display Screen Numbers	Select the data type of the screen number specified when changing screens from [Bin] or [BCD].
Change Screen from Display Unit	Set whether or not to reflect the settings in the device/PLC when the screen is changed from the display unit.
Reflect in Device/PLC	The currently displayed screen number is written into the connected device's [System Area Start Address] + 8 address. This option must be set to change screens from a Screen Change switch and connected device. ☞ "11.5 Changing the Displayed Screen from both Touch and a Device/PLC" (page 11-13)
Start Time	Set the time it takes for the display to start up after the power turns ON from 0 to 255 seconds.
Standby Mode	Select the standby mode from [None], [Screen OFF], or [Screen Change]. <ul style="list-style-type: none"> Disable The screen does not change to the standby mode. [Screen OFF] Clears the screen if there is no screen touch, screen change or alarm message display after the [Standby Mode Time] passes. Screen Change Changes to the screen specified in [Change-To Screen in Standby Mode] if there is no screen touch, screen change or alarm message display after the [Standby Mode Time] passes. NOTE <ul style="list-style-type: none"> When [Screen Change] is selected, the screen change switch where [Previous Screen] is set may not work properly.
Standby Mode Standby Mode Time	Set the time to automatically clear the screen to protect the display from 1 to 255 minutes. Automatically clears the screen display or changes to the specified screen when the specified time passes without any display operations.
Change-To Screen in Standby Mode	If [Screen Change] is selected for [Standby Mode], specifies the base screen number to switch to after [Standby Mode Time] passes. NOTE <ul style="list-style-type: none"> Set the screen number from 1 to 9999 when the [Data Type of Display Screen Numbers] is [Bin], and from 1 to 7999 for [BCD]. If the global window is displayed, the window remains even when the base screen changes.

- Display



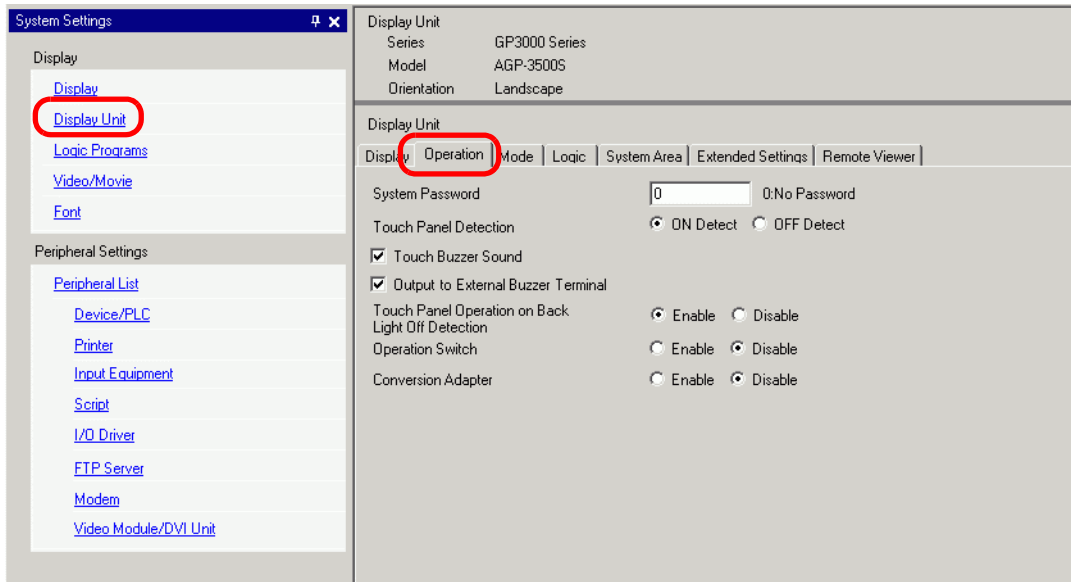
Setting	Description								
Color	Set the color for the display. <table border="1" data-bbox="399 537 1240 703"> <thead> <tr> <th>Type</th> <th>Color Setting Range</th> </tr> </thead> <tbody> <tr> <td>TFT Display</td> <td>65536 Colors, No Blink and 16384 Colors, 3-Speed Blink</td> </tr> <tr> <td>STN Display</td> <td>4096 Colors, 3-Speed Blink</td> </tr> <tr> <td>Monochrome Display</td> <td>Monochrome 16 Levels 3-Speed Blink</td> </tr> </tbody> </table>	Type	Color Setting Range	TFT Display	65536 Colors, No Blink and 16384 Colors, 3-Speed Blink	STN Display	4096 Colors, 3-Speed Blink	Monochrome Display	Monochrome 16 Levels 3-Speed Blink
Type	Color Setting Range								
TFT Display	65536 Colors, No Blink and 16384 Colors, 3-Speed Blink								
STN Display	4096 Colors, 3-Speed Blink								
Monochrome Display	Monochrome 16 Levels 3-Speed Blink								
Reverse Display	Set whether or not to display the screen with black/white reversed. <p>NOTE</p> <ul style="list-style-type: none"> • This can be set only when a monochrome display is selected. 								
Show Brightness/Contrast Control Bar	Select to control with touch inputs the brightness and contrast on the display unit.								
Dark Blink	Select [Black] or [Faded Color] for the alternating color of a part or picture with blink. If you select [Faded Color], the blink is a darker shade of the color specified in the part or picture.								
D-Script _debug () Function Feature	Set whether or not to execute the debug () function data described in D-Script. <p>☞ "21.11.7 Others n Debug Function" (page 21-143)</p>								

- Display Settings



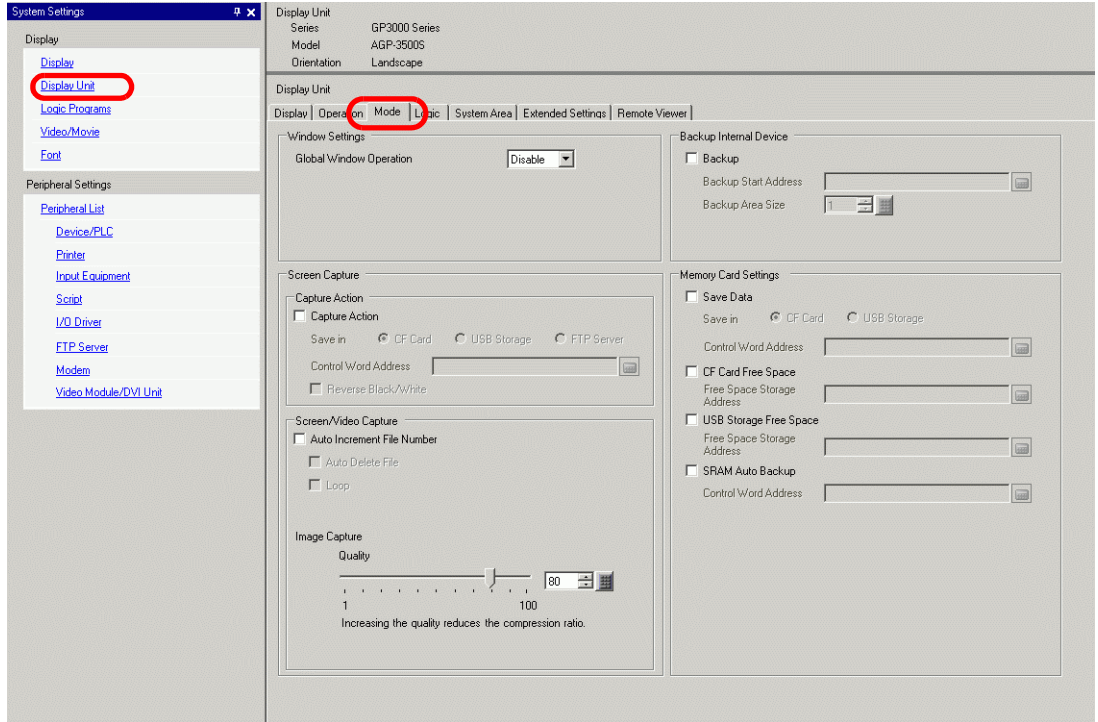
Setting	Description
System Language	Set the system language to either [English] or [Japanese]. The system language controls the language for the system menu, Brightness/Contrast Control, and error messages.
Offline Language	Select the offline menu display language from either [English] or [Japanese].
Show System Menu	Select the system menu position: [Do Not Display], [Upper Part], or [Lower Part].
Show Error Online	Select the timing for clearing online error displays: [None], [Clear at Recovery], or [Clear on Screen Change]. IMPORTANT <ul style="list-style-type: none"> • The error message that occurs when the device/PLC cannot be written to due to a communication error will not be deleted from the GP screen, even if [Clear at Recovery] is specified. You can delete this error message by initiating a screen change.
Error Display Position	Select the error display position: [Upper Part] or [Lower Part].
Auto Recovery on System Error	Set whether or not to perform auto recovery on system errors.

◆ Operation

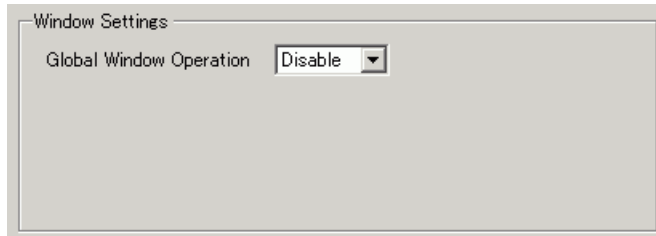


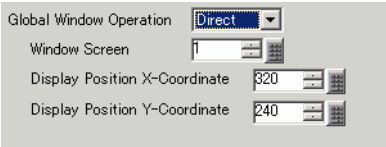
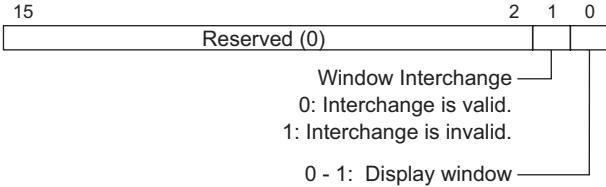
Setting	Description
System Password	Set the system password for the initial settings or to go offline from 0 to 99999999. Set "0" when a system password is unnecessary.
Touch Panel Detection	Select the detection timing from [ON Detect] (when touching the touch panel) or [OFF Detect] (when taking your finger off the touch panel).
Touch Buzzer Sound	Set whether or not to sound the built-in buzzer when touching the screen.
Output to External Buzzer Terminal	Set whether or not to output the touch panel buzzer to the external buzzer terminal.
Panel Operation on Back Light Off Detection	Set whether or not to enable touch panel operations when the backlight is burned out.

◆ Mode

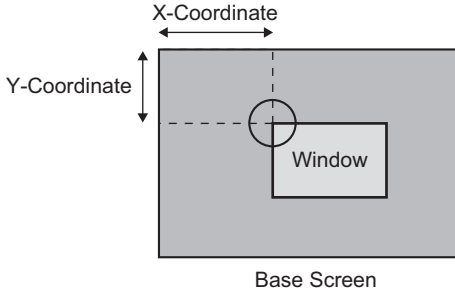

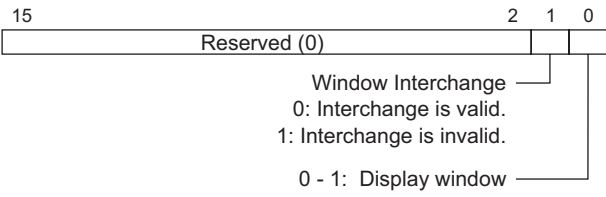


- Window Settings
Set the Global Window display settings.

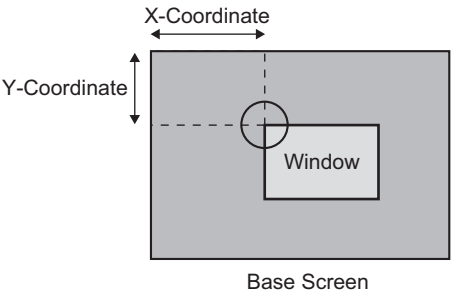


Setting	Description								
Global Window Operation	Select the action of the Global Window, which displays on all screens: [Disable], [Direct], or [Indirect].								
Disable	Does not use a Global Window.								
Direct	<p>Displays the Window Screen number to display and its position in a fixed state. Control the display with address LS16 in the GP internal device, or the device/PLC to which the system data area is assigned.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Setting Screen</p>  </div> <div style="text-align: center;"> <p>Internal Device Addresses to Use</p> <table border="1" data-bbox="828 846 1163 981"> <tr><td>LS0016</td><td>Control Address</td></tr> <tr><td>LS0017</td><td>(Reserved)</td></tr> <tr><td>LS0018</td><td>(Reserved)</td></tr> <tr><td>LS0019</td><td>(Reserved)</td></tr> </table> </div> </div> <ul style="list-style-type: none"> • Bit Control Address Controls the display of a Global Window. If you turn ON Bit 0, a Window is displayed. <div style="text-align: center;">  </div> <p>NOTE</p> <ul style="list-style-type: none"> • To use a system data area on the device/PLC, use four sequential words from the assigned address. ☞ " ◆ System Area Settings" (page 5-174) 	LS0016	Control Address	LS0017	(Reserved)	LS0018	(Reserved)	LS0019	(Reserved)
LS0016	Control Address								
LS0017	(Reserved)								
LS0018	(Reserved)								
LS0019	(Reserved)								
Window Screens Number	Set the Global Window screen number from 1 to 2,000.								

Continued

Setting		Description							
Global Window Operation	Direct	<p>Set the Global Window display position. Even if the screen changes, the Window is displayed in the same position. The coordinate specified here is the top left corner of the Window.</p>  <p>NOTE</p> <ul style="list-style-type: none"> Specifies the X-coordinate by 4 dots. If the display position is not specified by 4 dots, the position is automatically corrected by 4 dots to the left of the specified coordinate to display the Global Window. 							
	Indirect	<p>Set the Window Screen number to display and its position by storing data in the GP internal device's address (LS16 to LS19). If you assign a system data area to the device/PLC, you can switch Window Screens or change the display position from the device/PLC.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Setting Screen</p>  </div> <div style="text-align: center;"> <p>Internal Device Addresses to Use</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr><td>LS0016</td><td>Control Address</td></tr> <tr><td>LS0017</td><td>Window Screen No.</td></tr> <tr><td>LS0018</td><td>Display Position (X-Coordinate)</td></tr> <tr><td>LS0019</td><td>Display Position (Y-Coordinate)</td></tr> </table> </div> </div> <ul style="list-style-type: none"> Bit Control Address Controls the display of a Global Window. If you turn ON Bit 0, a Window is displayed.  <ul style="list-style-type: none"> Window Screen Number Specify the number of the Window Screen you want to display from 1 to 2000. 	LS0016	Control Address	LS0017	Window Screen No.	LS0018	Display Position (X-Coordinate)	LS0019
LS0016	Control Address								
LS0017	Window Screen No.								
LS0018	Display Position (X-Coordinate)								
LS0019	Display Position (Y-Coordinate)								



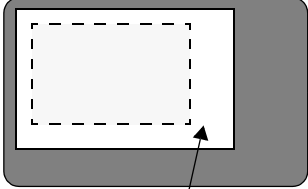
Continued

Setting		Description
Global Window Operation	Indirect	<ul style="list-style-type: none"> • Display Position X-Coordinate/Y-Coordinate Set the Global Window display position. If you change the value to store in the address, you can move the Window. The coordinate specified here is the top left corner of the Window.  <p style="text-align: center;">Base Screen</p> <p>NOTE</p> <ul style="list-style-type: none"> • To use a system data area on the device/PLC, use four sequential words from the assigned address. ☞ "◆ System Area Settings" (page 5-174)
	Data Type	Select the type of data to store in the address from [Bin] or [BCD].
	Use Bulletin Messages	Specify whether to use the bulletin message of the message display. <p>NOTE</p> <ul style="list-style-type: none"> • For GP-3300 Series, only a model of Rev 4 or later can use the bulletin message feature. For more information about this function, please refer to the following. ☞ "17.8 Displaying Bulletin Message on Multiple GP Screens" (page 17-44)

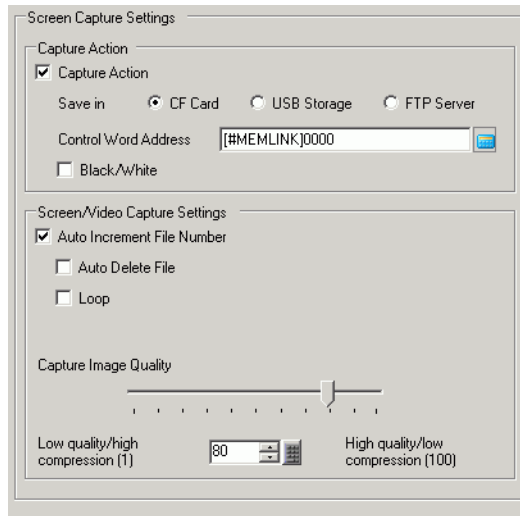
Continued

Setting		Description																						
Global Window Operation	Indirect	<p>Select the start internal address (LS area, USER area or memory link system area) which will trigger the message display. As per the following format, values are used with the specified internal address.</p> <table border="1"> <thead> <tr> <th>Address</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Specified Address+0</td> <td>Display Trigger</td> </tr> <tr> <td>Specified Address+1</td> <td>Window Number</td> </tr> <tr> <td>Specified Address+2</td> <td>X coordinate of the window display position</td> </tr> <tr> <td>Specified Address+3</td> <td>Y coordinate of the window display position</td> </tr> </tbody> </table> <p>Additions in the Specified Address conform to the device size.</p> <ul style="list-style-type: none"> • When it is a 16-bit device, addition is based on words. • When it is a 32-bit device, addition is based on double words. • Specified Address+0: Display Trigger Set Display/Delete settings of the window screen. <table border="1"> <thead> <tr> <th>...</th> <th>1</th> <th>0</th> </tr> </thead> <tbody> <tr> <td>Reserved</td> <td></td> <td>Display/Delete</td> </tr> </tbody> </table> <p>Specify bit 0 as a message display/clear trigger. The same bit is used regardless of the size of the specified device (16 bit/32 bit device).</p> <table border="1"> <thead> <tr> <th>State</th> <th>Delete/Display bit 0 Bit</th> </tr> </thead> <tbody> <tr> <td>Delete</td> <td>OFF</td> </tr> <tr> <td>Display</td> <td>ON</td> </tr> </tbody> </table> <ul style="list-style-type: none"> • If a bit other than the display/delete bit is selected, it will be ignored. • It interacts with the window number, window display position (X coordinate), and window display position (Y coordinate). • The action in each state is as follows. <ul style="list-style-type: none"> •Delete Turn OFF the window control in the system data area. •Display Set the values of window number and window display positions (X and Y coordinates) of the specified address to the window number and window display positions (X and Y coordinates) of the system data area. Turn ON the window display of the window control. Enable the window interchange of the window control. 	Address	Description	Specified Address+0	Display Trigger	Specified Address+1	Window Number	Specified Address+2	X coordinate of the window display position	Specified Address+3	Y coordinate of the window display position	...	1	0	Reserved		Display/Delete	State	Delete/Display bit 0 Bit	Delete	OFF	Display	ON
		Address	Description																					
Specified Address+0	Display Trigger																							
Specified Address+1	Window Number																							
Specified Address+2	X coordinate of the window display position																							
Specified Address+3	Y coordinate of the window display position																							
...	1	0																						
Reserved		Display/Delete																						
State	Delete/Display bit 0 Bit																							
Delete	OFF																							
Display	ON																							
	Start Word Address																							

Continued

Setting		Description
Global Window Operation	Indirect	<p>Example: Specified internal address is USR0100</p> <p>System settings specified address System Data Area</p> <p>Window Number <input type="text" value="USR0101"/>  <input type="text" value="Window Number"/></p> <p>Window X coordinate <input type="text" value="USR0102"/> <input type="text" value="Display Position (X Coordinate)"/></p> <p>Window Y coordinate <input type="text" value="USR0103"/> <input type="text" value="Display Position (Y Coordinate)"/></p> <p>Window display trigger <input type="text" value="USR0100"/> Settings → <input type="text" value="Window Control"/></p> <p style="text-align: center;">Delete (OFF) Display (ON)</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Base Screen</p> </div> <div style="text-align: center;">  <p>Window Screen</p> </div> </div> <ul style="list-style-type: none"> • Specified Address+1: Window Number Specify the window screen number. • Specified Address+2: X coordinate of the window display position Specify the X coordinate of the window display position. • Specified Address+3: Y coordinate of the window display position Specify the Y coordinate of the window display position.
		Start Word Address

- **Screen Capture Settings**
Prints hard copy of the GP screen or video screen.



Setting		Description					
Capture Settings	Capture Action	Set whether or not to perform a screen capture.					
	Save in	Select the location to save the captured screen from the [CF Card], [USB Storage], or [FTP Server].					
	Control Word Address	<p>Set the control word address to trigger the screen capture. Three words are used starting from the designated [Control Word Address] to check the file number, file output execution, and saving results (status).</p> <ul style="list-style-type: none"> • About Address <table border="1" style="margin-left: 40px;"> <tr> <td>Address +0</td> <td>Control</td> </tr> <tr> <td>Address +1</td> <td>Status</td> </tr> <tr> <td>Address +2</td> <td>Hard Copy File No.</td> </tr> </table> <p>* [Hardcopy File Number] is enabled only when a CF or USB storage is selected.</p> <p>Control</p> <p>Status</p>	Address +0	Control	Address +1	Status	Address +2
Address +0	Control						
Address +1	Status						
Address +2	Hard Copy File No.						

Continued

	Setting	Description																																										
Capture Settings	Control Word Address	Details of JPEG Error Code																																										
		<table border="1"> <thead> <tr> <th data-bbox="410 233 546 272">Bit 12-15</th> <th data-bbox="546 233 820 272">Description</th> <th data-bbox="820 233 1225 272">Introduction</th> </tr> </thead> <tbody> <tr> <td data-bbox="410 272 546 340">0000</td> <td data-bbox="546 272 820 340">Completed Successfully</td> <td data-bbox="820 272 1225 340">Occurs when the process was completed successfully.</td> </tr> <tr> <td data-bbox="410 340 546 378">0001</td> <td data-bbox="546 340 820 378">Reserved</td> <td data-bbox="820 340 1225 378"></td> </tr> <tr> <td data-bbox="410 378 546 417">0010</td> <td data-bbox="546 378 820 417">Reserved</td> <td data-bbox="820 378 1225 417"></td> </tr> <tr> <td data-bbox="410 417 546 455">0011</td> <td data-bbox="546 417 820 455">Reserved</td> <td data-bbox="820 417 1225 455"></td> </tr> <tr> <td data-bbox="410 455 546 581">0100</td> <td data-bbox="546 455 820 581">CF Card/USB No storage</td> <td data-bbox="820 455 1225 581">Occurs during snapshot or JPEG data display, either the CF Card/USB storage is not inserted or the CF Card hatch is open.</td> </tr> <tr> <td data-bbox="410 581 546 707">0101</td> <td data-bbox="546 581 820 707">Write Error</td> <td data-bbox="820 581 1225 707">Occurs when the CF Card/USB storage device does not have sufficient free space for capturing or when it is removed during writing.</td> </tr> <tr> <td data-bbox="410 707 546 745">0110</td> <td data-bbox="546 707 820 745">Reserved</td> <td data-bbox="820 707 1225 745"></td> </tr> <tr> <td data-bbox="410 745 546 813">0111</td> <td data-bbox="546 745 820 813">CF Card/USB storage error</td> <td data-bbox="820 745 1225 813">Occurs when the CF Card/USB storage has not been formatted.</td> </tr> <tr> <td data-bbox="410 813 546 852">1000</td> <td data-bbox="546 813 820 852">Reserved</td> <td data-bbox="820 813 1225 852"></td> </tr> <tr> <td data-bbox="410 852 546 948">1001</td> <td data-bbox="546 852 820 948">Excess of Number of Auto Increment Files</td> <td data-bbox="820 852 1225 948">Occurs when the file number exceeds 65535 in the auto increment feature.</td> </tr> <tr> <td data-bbox="410 948 546 1016">1010</td> <td data-bbox="546 948 820 1016">FTP Sever Connection Error</td> <td data-bbox="820 948 1225 1016">Occurs when the FTP server cannot be accessed.</td> </tr> <tr> <td data-bbox="410 1016 546 1083">1011</td> <td data-bbox="546 1016 820 1083">FTP Login Error</td> <td data-bbox="820 1016 1225 1083">Occurs when an attempt to log into the FTP server has failed.</td> </tr> <tr> <td data-bbox="410 1083 546 1151">1100</td> <td data-bbox="546 1083 820 1151">Write error</td> <td data-bbox="820 1083 1225 1151">Occurs when an attempt to write data to the FTP server fails.</td> </tr> </tbody> </table>	Bit 12-15	Description	Introduction	0000	Completed Successfully	Occurs when the process was completed successfully.	0001	Reserved		0010	Reserved		0011	Reserved		0100	CF Card/USB No storage	Occurs during snapshot or JPEG data display, either the CF Card/USB storage is not inserted or the CF Card hatch is open.	0101	Write Error	Occurs when the CF Card/USB storage device does not have sufficient free space for capturing or when it is removed during writing.	0110	Reserved		0111	CF Card/USB storage error	Occurs when the CF Card/USB storage has not been formatted.	1000	Reserved		1001	Excess of Number of Auto Increment Files	Occurs when the file number exceeds 65535 in the auto increment feature.	1010	FTP Sever Connection Error	Occurs when the FTP server cannot be accessed.	1011	FTP Login Error	Occurs when an attempt to log into the FTP server has failed.	1100	Write error	Occurs when an attempt to write data to the FTP server fails.
		Bit 12-15	Description	Introduction																																								
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1100	Write error	Occurs when an attempt to write data to the FTP server fails.																																										
NOTE	<ul style="list-style-type: none"> The FTP Server timeout is 75 seconds. An error will occur if a connection to the FTP Server does not occur within the timeout period. The time stamp will be saved as part of the file name. For example, when the file is saved on 2006/05/27, at 15:23:46, the filename is CP060527_152346.jpg. <p>(Hard Copy File Number)</p> <ul style="list-style-type: none"> Saving on a CF Card or in a USB storage device Specify *****part of the file name [CP*****.jpg] of the screen-captured file from 5 to 65535. When [Auto Increment File Number] is used, the file number is automatically stored in this address. Saving on FTP server The file number of the screen-captured file uses the time stamp and does not refer to the [Control Address]+2 value. 																																											

Continued

Setting	Description																							
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Capture Settings</p> <p>Control Word Address</p>	<ul style="list-style-type: none"> Details of Capture Action In the file output completion bit, the status address Bit 1 turns ON when the capture process was completed. After the capture process is complete, confirm that the file output completion bit is ON and then turn OFF the file output bit from the device/PLC. If the file output bit is turned OFF, the GP turns OFF the file output completion bit. The timing of the control and status during capture is as follows. <div style="text-align: center;"> <p>○=GP turns OFF. ◇=Turn OFF the bit.</p> </div> <p>NOTE</p> <ul style="list-style-type: none"> If you turn OFF the file output bit (control) before the file output completion bit turns ON, the file output completion bit is automatically turned OFF. If an error occurs while processing screen capture, the status area is not cleared when the control address trigger bit is turned OFF. It will be cleared next time the process is completed successfully. 																							
<p>Reverse Black/White</p>	<p>Specifies whether to save the screen captured on a CF Card in black and white reverse display.</p> <p>NOTE</p> <ul style="list-style-type: none"> On a monochrome or color model, the black/white reverse states are displayed as follows. <table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th rowspan="2">PC Screen</th> <th rowspan="2">GP Type</th> <th rowspan="2">GP Screen</th> <th colspan="2">Black/White Reverse Display (in CF-Card)</th> </tr> <tr> <th>Enable</th> <th>Disable</th> </tr> </thead> <tbody> <tr> <td rowspan="2"> (White O) </td> <td rowspan="2" style="writing-mode: vertical-rl; transform: rotate(180deg);">Monochrome</td> <td> (Normal) Black </td> <td> Black </td> <td> White </td> </tr> <tr> <td> (Reverse) White </td> <td> White </td> <td> Black </td> </tr> <tr> <td rowspan="2"> (Other Colors) e.g.: Green </td> <td rowspan="2" style="writing-mode: vertical-rl; transform: rotate(180deg);">Color</td> <td> White </td> <td> Black </td> <td> White </td> </tr> <tr> <td> Green </td> <td> Green </td> <td> Green </td> </tr> </tbody> </table> <ul style="list-style-type: none"> You can reverse only black or only white. Color inversion is not available. 	PC Screen	GP Type	GP Screen	Black/White Reverse Display (in CF-Card)		Enable	Disable	 (White O)	Monochrome	 (Normal) Black	 Black	 White	 (Reverse) White	 White	 Black	 (Other Colors) e.g.: Green	Color	 White	 Black	 White	 Green	 Green	 Green
PC Screen	GP Type				GP Screen	Black/White Reverse Display (in CF-Card)																		
		Enable	Disable																					
 (White O)	Monochrome	 (Normal) Black	 Black	 White																				
		 (Reverse) White	 White	 Black																				
 (Other Colors) e.g.: Green	Color	 White	 Black	 White																				
		 Green	 Green	 Green																				

Continued

	Setting	Description
Capture Settings	Auto Increment File Number	<p>When a screen is captured, a new file is created with a file name automatically assigned by adding 1 (numbering) to the highest number of the existing files. The feature is available when saving to [CF Card] or [USB Storage].</p> <p>The automatically numbered file number will be written to designated [Control Word Address] +2.</p> <p>Numbering occurs to a maximum of 65535. After that screen capture will not function. To continue, use [Auto Delete File] or [Loop].</p> <p>NOTE</p> <ul style="list-style-type: none">• The GP searches for the highest file number upon GP power-up, upon opening/closing of the CF Card cover, and upon insertion/removal of the CF Card/USB storage.• When using this function, file numbers specified to the designated [Control Word Address] +2 are ignored.

Continued

Setting	Description
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Screen/Video Capture Settings</p> <p style="writing-mode: vertical-rl; transform: rotate(180deg);">Auto Increment File Number</p> <p>Auto Delete File</p>	<p>Deletes existing files and allows new files to be saved when the file number exceeds the maximum of 65535 or the CF Card/USB storage does not have sufficient free space.</p> <p>When a file with the highest file number exists If the CF Card/USB storage already has the maximum number (65535) file, it deletes all the existing files and creates new files starting with the file number 0.</p> <p>For example, When "CP65535.JPG" exists in the CF Card</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; text-align: center;"> <p>CF-Card</p> <p>CP00100.JPG CP00101.JPG CP00102.JPG ⋮ ⋮ CP65535.JPG</p> </div> <div style="font-size: 2em;">➔</div> <div style="border: 1px solid black; padding: 5px; text-align: center;"> <p>CF-Card</p> <p>CP00000.JPG</p> </div> </div> <p style="text-align: center;">After capture</p> <p>All screen capture files in the CF Card "CP *****.JPG" are deleted and "CP00000.JPG" is saved.</p> <p>NOTE</p> <ul style="list-style-type: none"> • All files are deleted so this can take from a few seconds to a few minutes. <p>When the CF Card/USB does not have sufficient free space This feature deletes the file with the lowest file number and creates a file with the highest file number + 1.</p> <p>For example, Files with file numbers CP00100.JPG to CP00300.JPG are saved on the CF Card.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; text-align: center;"> <p>CF-Card</p> <p>CP00100.JPG CP00101.JPG CP00102.JPG ⋮ ⋮ CP00300.JPG</p> </div> <div style="font-size: 2em;">➔</div> <div style="border: 1px solid black; padding: 5px; text-align: center;"> <p>CF-Card</p> <p>CP00101.JPG CP00102.JPG ⋮ ⋮ CP00300.JPG CP00301.JPG</p> </div> </div> <p style="text-align: center;">After capture</p> <p>The file with the smallest number, "CP00100.JPG", is deleted and the new file "CP00301.JPG" is created.</p>

Continued

Setting	Description																																														
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Screen/Video Capture Settings</p> <p style="writing-mode: vertical-rl; transform: rotate(180deg);">Auto Increment File Number</p> <p style="text-align: center;">Loop</p>	<p>During screen capture, a new file is created with the file number assigned by adding 1 to the file number with the most recent time stamp among file numbers in the CF Card/USB storage. 00000 through 65535 exist on the CF Card, the files will be overwritten sequentially from file Number 00000 and the screen captures will continue.</p> <p>NOTE</p> <ul style="list-style-type: none"> File timestamps are checked each time a file is created. <p>The latest file has the highest file number When the latest file number is 65535, a new file is created with file Number 00000.</p> <p>For example, Files with file numbers "CP65531.JPG" to "CP65535.JPG" are saved on the CF Card.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <table border="1" style="border-collapse: collapse; text-align: left;"> <caption>CF-Card</caption> <tr><td>CP65531.JPG</td><td>9:00</td></tr> <tr><td>CP65532.JPG</td><td>10:00</td></tr> <tr><td>CP65533.JPG</td><td>11:00</td></tr> <tr><td>CP65534.JPG</td><td>12:00</td></tr> <tr><td>CP65535.JPG</td><td>13:00</td></tr> </table> <table border="1" style="border-collapse: collapse; text-align: left;"> <caption>CF-Card</caption> <tr><td>CP00000.JPG</td><td>14:00</td></tr> <tr><td>CP65531.JPG</td><td>9:00</td></tr> <tr><td>CP65532.JPG</td><td>10:00</td></tr> <tr><td>CP65533.JPG</td><td>11:00</td></tr> <tr><td>CP65534.JPG</td><td>12:00</td></tr> <tr><td>CP65535.JPG</td><td>13:00</td></tr> </table> </div> <p>A new file, "CP00000.JPG", is created.</p> <p>When the CF Card/USB does not have sufficient free space During screen capture, the oldest file is deleted and the new file is saved with a file number 1 larger than the latest file.</p> <p>For example, When the latest file is "CP00000.JPG"</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <table border="1" style="border-collapse: collapse; text-align: left;"> <caption>CF-Card</caption> <tr><td>CP00000.JPG</td><td>14:00</td></tr> <tr><td>CP65531.JPG</td><td>9:00</td></tr> <tr><td>CP65532.JPG</td><td>10:00</td></tr> <tr><td>CP65533.JPG</td><td>11:00</td></tr> <tr><td>CP65534.JPG</td><td>12:00</td></tr> <tr><td>CP65535.JPG</td><td>13:00</td></tr> </table> <table border="1" style="border-collapse: collapse; text-align: left;"> <caption>CF-Card</caption> <tr><td>CP00000.JPG</td><td>14:00</td></tr> <tr><td>CP00001.JPG</td><td>15:00</td></tr> <tr><td>CP65532.JPG</td><td>10:00</td></tr> <tr><td>CP65533.JPG</td><td>11:00</td></tr> <tr><td>CP65534.JPG</td><td>12:00</td></tr> <tr><td>CP65535.JPG</td><td>13:00</td></tr> </table> </div> <p>The oldest file, "CP65531.JPG", is deleted and the new file "CP00001.JPG" is created.</p> <p>NOTE</p> <ul style="list-style-type: none"> When a file is deleted due to insufficient free space on the CF Card or the USB storage, the oldest file is deleted in order to create a new file. In such a case, it may take twice as long to save a file compared to saving when there is sufficient free space. When saving to FTP, the auto increment file number feature is not available. 	CP65531.JPG	9:00	CP65532.JPG	10:00	CP65533.JPG	11:00	CP65534.JPG	12:00	CP65535.JPG	13:00	CP00000.JPG	14:00	CP65531.JPG	9:00	CP65532.JPG	10:00	CP65533.JPG	11:00	CP65534.JPG	12:00	CP65535.JPG	13:00	CP00000.JPG	14:00	CP65531.JPG	9:00	CP65532.JPG	10:00	CP65533.JPG	11:00	CP65534.JPG	12:00	CP65535.JPG	13:00	CP00000.JPG	14:00	CP00001.JPG	15:00	CP65532.JPG	10:00	CP65533.JPG	11:00	CP65534.JPG	12:00	CP65535.JPG	13:00
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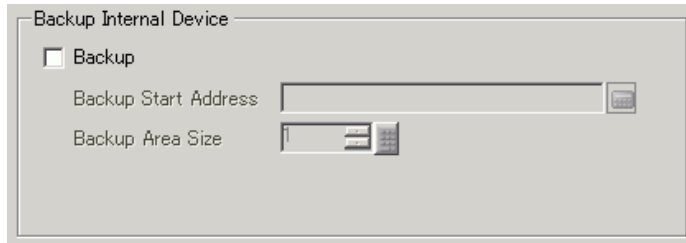
Setting		Description
Screen/Video Capture Settings	FTP server	<p>It is displayed only when you select [FTP Server] for the Save in location. Select the FTP server number to use. (FTP server number is the number that you registered in the system settings [FTP Server Settings]).</p> <p>NOTE</p> <ul style="list-style-type: none">• The time stamp is given to the file name.
	Capture Image Quality	<p>Specify the capture image quality from 1 to 100. You can also specify by directly inputting numeric values.</p> <p>1 : Low-Quality Image, High Compression 100: High Quality Image, Low Compression</p>

- Backup Internal Device

Copies data stored in the internal device addresses user area to the backup SRAM. If you specified the Backup Internal Device, the GP will start up maintaining the data stored in the internal device address when you turn ON the GP again.

IMPORTANT

- The data stored in the GP internal device is cleared when turning OFF the GP or when the GP goes offline. You can use this function to back up the data in the user area.



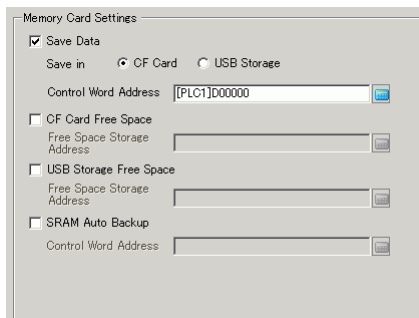
Setting	Description																																			
Backup	<p>Set whether or not to backup the GP internal device.</p> <p>NOTE</p> <ul style="list-style-type: none"> • Backs up the data stored in sequential addresses in the user area. Select the user area range from LS or USR. (System area of USR for the memory link method.) You cannot back up multiple ranges. If you select the LS area in the direct access method, only one of the two user areas (red frame portion) is backed up. This holds true for selecting the system area in the memory link method. <table border="0" style="width: 100%; text-align: center;"> <tr> <td colspan="2" style="text-align: center;">Direct Access Method</td> <td colspan="2" style="text-align: center;">Memory Link Method</td> </tr> <tr> <td colspan="2" style="text-align: center;">LS Area</td> <td colspan="2" style="text-align: center;">System Area</td> </tr> <tr> <td style="text-align: left;">LS0000</td> <td style="border: 1px solid black; padding: 2px;">System Data Area</td> <td style="border: 1px solid black; padding: 2px;">System Data Area</td> <td style="text-align: right;">0000</td> </tr> <tr> <td style="text-align: left;">LS0020</td> <td style="border: 2px solid red; padding: 2px;">Read Area</td> <td rowspan="2" style="border: 2px solid red; padding: 2px;">User Area</td> <td style="text-align: right;">0020</td> </tr> <tr> <td style="text-align: left;">(LS0276)</td> <td style="border: 2px solid red; padding: 2px;">User Area</td> <td style="text-align: right;">2032</td> </tr> <tr> <td style="text-align: left;">LS2032</td> <td style="border: 1px solid black; padding: 2px;">Special Relay Area</td> <td style="border: 1px solid black; padding: 2px;">Special Relay Area</td> <td style="text-align: right;">2048</td> </tr> <tr> <td style="text-align: left;">LS2048</td> <td style="border: 1px solid black; padding: 2px;">Reserved Area</td> <td style="border: 1px solid black; padding: 2px;">Reserved Area</td> <td style="text-align: right;">2096</td> </tr> <tr> <td style="text-align: left;">LS2096</td> <td style="border: 2px solid red; padding: 2px;">User Area</td> <td style="border: 2px solid red; padding: 2px;">User Area</td> <td style="text-align: right;">8999</td> </tr> <tr> <td style="text-align: left;">LS8999</td> <td></td> <td></td> <td></td> </tr> </table>	Direct Access Method		Memory Link Method		LS Area		System Area		LS0000	System Data Area	System Data Area	0000	LS0020	Read Area	User Area	0020	(LS0276)	User Area	2032	LS2032	Special Relay Area	Special Relay Area	2048	LS2048	Reserved Area	Reserved Area	2096	LS2096	User Area	User Area	8999	LS8999			
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(LS0276)	User Area		2032																																	
LS2032	Special Relay Area	Special Relay Area	2048																																	
LS2048	Reserved Area	Reserved Area	2096																																	
LS2096	User Area	User Area	8999																																	
LS8999																																				

Continued

Setting	Description						
Backup Start Address	<p>Set the start address of the internal device to back up. Set the start address within the range to ensure the [Backup Area Size].</p> <p>For direct access method, the start address should be specified within the range of LS20 to LS2031, LS2096 to LS8999, or USR0 to USR29999.</p> <p>For memory link method, the start address should be specified within the range of 20 to 2031, 2096 to 8999, or USR0 to USR29999.</p>						
Backup Area Size	<p>Set the internal device size to back up.</p> <p>IMPORTANT</p> <ul style="list-style-type: none"> If the [Backup Start Address] + [Backup Area Size] exceeds the valid range of the internal device backup, the backup function will not work. <p>NOTE</p> <ul style="list-style-type: none"> If LS area or M to M Device (Memo link) is used, set from 1 to 6,096. If USR area is used, set from 1 to 30,000. The internal device's backup size depends on the backup area size. <p>Calculation $16 + (4 * 1 \times \text{Backup Area Size})$</p> <p>For example:</p> <table border="1" data-bbox="415 855 1071 960"> <thead> <tr> <th>Settings</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Backup Start Address</td> <td>LS2096</td> </tr> <tr> <td>Backup Area</td> <td>6096</td> </tr> </tbody> </table> <p>Calculation Result $(16) + (4 \times 6096) = 24400$ bytes (approximately 24 KB)</p> <p>*1 The value is 4 for the LS device address and the memory link. The value is 2 for the USR device address. If the Backup Area Size is an odd number, add 1 to the value.</p>	Settings	Description	Backup Start Address	LS2096	Backup Area	6096
Settings	Description						
Backup Start Address	LS2096						
Backup Area	6096						

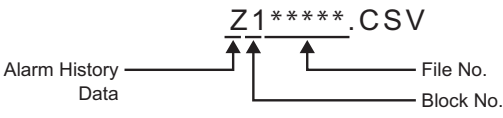
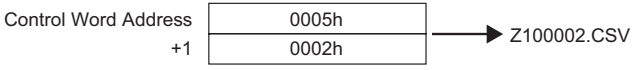
- Memory Card Settings

Configures the settings for saving data to various memory cards.



Setting	Description																																																			
Save data	<p>Specifies whether to save the data stored in the backup SRAM when the GP is active, such as filing data or CSV files (Alarm, Sampling), on a [CF Card] or in [USB Storage].</p> <p>☞ "5.18.2 Restrictions on Saving Data" (page 5-211)</p>																																																			
Control Word Address	<p>This address controls writing data. It writes a command to the address after designating a file number.</p> <div style="text-align: center;"> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="padding: 2px;">Control Word Address</td> <td style="padding: 2px;">Command/Status</td> </tr> <tr> <td style="padding: 2px;">+1</td> <td style="padding: 2px;">File No.</td> </tr> </table> </div> <p>Command/Status Enters a command to write data to a CF Card or a USB storage device The processing results (status) are reflected in the address. The processing results (status) are reflected in the address.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Mode</th> <th style="width: 20%;">Summary</th> <th style="width: 70%;">Description</th> </tr> </thead> <tbody> <tr> <td rowspan="14" style="text-align: center; vertical-align: middle;">Command</td> <td>0001h</td> <td>Filing Data</td> </tr> <tr> <td>0002h</td> <td>GP-PRO/PB III for Windows Logging data (compatible)</td> </tr> <tr> <td>0003h</td> <td>GP-PRO/PB III for Windows Line Chart data (compatible)</td> </tr> <tr> <td>0004h</td> <td>GP-PRO/PB III for Windows exclusive sampling data (compatible)</td> </tr> <tr> <td>0005h</td> <td>Block 1's Alarm History data</td> </tr> <tr> <td>0006h</td> <td>Block 2's Alarm History data</td> </tr> <tr> <td>0007h</td> <td>Block 3's Alarm History data</td> </tr> <tr> <td>0008h</td> <td>Block 4's Alarm History data</td> </tr> <tr> <td>0009h</td> <td>Block 5's Alarm History data</td> </tr> <tr> <td>000ah</td> <td>Block 6's Alarm History data</td> </tr> <tr> <td>000bh</td> <td>Block 7's Alarm History data</td> </tr> <tr> <td>000ch</td> <td>Block 8's Alarm History data</td> </tr> <tr> <td>0020h</td> <td>GP-PRO/PB III for Windows Logging loop auto-save start (compatible)</td> </tr> <tr> <td>0021h</td> <td>GP-PRO/PB III for Windows Logging loop auto-save completion (compatible)</td> </tr> <tr> <td rowspan="7" style="text-align: center; vertical-align: middle;">Status</td> <td>0000h</td> <td>Completed Successfully</td> </tr> <tr> <td>0100h</td> <td>Write Error</td> </tr> <tr> <td>0200h</td> <td>No CF Card is inserted, or the cover is open.</td> </tr> <tr> <td>0300h</td> <td>No data to be loaded (when no data is specified)</td> </tr> <tr> <td>0400h</td> <td>File Number Error (File number is outside of range)</td> </tr> <tr> <td>0500h</td> <td>Conflict error with the Pro-Server request</td> </tr> <tr> <td>2000h</td> <td>GP-PRO/PB III for Windows Logging loop auto-save responding correctly (compatible) While the Control Address has this value, the auto-save mode continues. When the value is changed, the auto-save mode finishes.</td> </tr> </tbody> </table>	Control Word Address	Command/Status	+1	File No.	Mode	Summary	Description	Command	0001h	Filing Data	0002h	GP-PRO/PB III for Windows Logging data (compatible)	0003h	GP-PRO/PB III for Windows Line Chart data (compatible)	0004h	GP-PRO/PB III for Windows exclusive sampling data (compatible)	0005h	Block 1's Alarm History data	0006h	Block 2's Alarm History data	0007h	Block 3's Alarm History data	0008h	Block 4's Alarm History data	0009h	Block 5's Alarm History data	000ah	Block 6's Alarm History data	000bh	Block 7's Alarm History data	000ch	Block 8's Alarm History data	0020h	GP-PRO/PB III for Windows Logging loop auto-save start (compatible)	0021h	GP-PRO/PB III for Windows Logging loop auto-save completion (compatible)	Status	0000h	Completed Successfully	0100h	Write Error	0200h	No CF Card is inserted, or the cover is open.	0300h	No data to be loaded (when no data is specified)	0400h	File Number Error (File number is outside of range)	0500h	Conflict error with the Pro-Server request	2000h	GP-PRO/PB III for Windows Logging loop auto-save responding correctly (compatible) While the Control Address has this value, the auto-save mode continues. When the value is changed, the auto-save mode finishes.
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Setting	Description																																																													
Control Word Address	<p>File Name and Save Location</p> <p>When [Enable Multiple Folders] is specified for filing data, specify within the range of 1 to 8999. When it is not specified, the file number will be fixed to "1".</p> <p>For example, after writing a command, Alarm History data is saved to the [ALARM] folder on the CF Card or USB storage device with the following name.</p> <div style="text-align: center;">  </div> <p>e.g.)</p> <div style="text-align: center;">  </div> <p>NOTE</p> <ul style="list-style-type: none"> When the CF Card is reset by the GP unit, a folder is created to save data. 																																																													
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">Folder</th> <th style="width: 60%;">Data to be saved</th> <th style="width: 25%;">File Name</th> </tr> </thead> <tbody> <tr> <td rowspan="2">\FILE</td> <td>Filing Data</td> <td>F*****.BIN</td> </tr> <tr> <td>Transfer CSV Data</td> <td>ZR*****.CSV</td> </tr> <tr> <td>\LOG</td> <td>GP-PRO/PB III for Windows Logging data (compatible)</td> <td>ZL*****.CSV</td> </tr> <tr> <td rowspan="2">\DATA</td> <td>Image Screen</td> <td>I*****.BIN</td> </tr> <tr> <td>Sound Data</td> <td>O*****.BIN</td> </tr> <tr> <td>\CAPTURE</td> <td>Screen Capture /Video Capture</td> <td>CP*****.JPG</td> </tr> <tr> <td>\MOVIE</td> <td>Movie File</td> <td>*.SDX</td> </tr> <tr> <td rowspan="2">\TREND</td> <td>GP-PRO/PB III for Windows Line Chart data (compatible)</td> <td>ZT*****.CSV</td> </tr> <tr> <td>GP-PRO/PB III for Windows Sampled data (compatible)</td> <td>ZS*****.CSV</td> </tr> <tr> <td rowspan="8">\ALARM</td> <td>Block 1's Alarm History data</td> <td>Z1*****.CSV</td> </tr> <tr> <td>Block 2's Alarm History data</td> <td>Z2*****.CSV</td> </tr> <tr> <td>Block 3's Alarm History data</td> <td>Z3*****.CSV</td> </tr> <tr> <td>Block 4's Alarm History data</td> <td>Z4*****.CSV</td> </tr> <tr> <td>Block 5's Alarm History data</td> <td>Z5*****.CSV</td> </tr> <tr> <td>Block 6's Alarm History data</td> <td>Z6*****.CSV</td> </tr> <tr> <td>Block 7's Alarm History data</td> <td>Z7*****.CSV</td> </tr> <tr> <td>Block 8's Alarm History data</td> <td>Z8*****.CSV</td> </tr> <tr> <td>\SRAM</td> <td>Backup SRAM data</td> <td>ZD*****.BIN</td> </tr> <tr> <td>\SAMP01</td> <td>Sampling Group 1's data</td> <td>SA*****.CSV</td> </tr> <tr> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>\SAMP64</td> <td>Sampling Group 64's data</td> <td>SA*****.CSV</td> </tr> </tbody> </table>	Folder	Data to be saved	File Name	\FILE	Filing Data	F*****.BIN	Transfer CSV Data	ZR*****.CSV	\LOG	GP-PRO/PB III for Windows Logging data (compatible)	ZL*****.CSV	\DATA	Image Screen	I*****.BIN	Sound Data	O*****.BIN	\CAPTURE	Screen Capture /Video Capture	CP*****.JPG	\MOVIE	Movie File	*.SDX	\TREND	GP-PRO/PB III for Windows Line Chart data (compatible)	ZT*****.CSV	GP-PRO/PB III for Windows Sampled data (compatible)	ZS*****.CSV	\ALARM	Block 1's Alarm History data	Z1*****.CSV	Block 2's Alarm History data	Z2*****.CSV	Block 3's Alarm History data	Z3*****.CSV	Block 4's Alarm History data	Z4*****.CSV	Block 5's Alarm History data	Z5*****.CSV	Block 6's Alarm History data	Z6*****.CSV	Block 7's Alarm History data	Z7*****.CSV	Block 8's Alarm History data	Z8*****.CSV	\SRAM	Backup SRAM data	ZD*****.BIN	\SAMP01	Sampling Group 1's data	SA*****.CSV	-	-	-	-	-	-	-	-	-	\SAMP64	Sampling Group 64's data
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CF Card Free Space	Set whether or not to store the CF Card's free space in an internal device. You can then view the CF Card's free space.																																																													

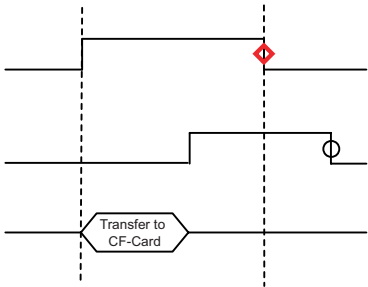
Continued

Setting	Description
Free Space Storage Address	<p>Set the address to store CF Card free space. For direct access method, the start address should be specified within the range of LS20 to LS2031, LS2096 to LS8999, or USR0 to USR29999. For direct access method, the start address should be specified within the range of 20 to 2031, 2096 to 8999, or USR0 to USR29999. Stores the value within the range of 0 to 65535 (FFFFh) in the specified address. The unit of a value to be stored is in KB.</p> <p>NOTE</p> <ul style="list-style-type: none"> • When a CF Card is not inserted, the GP cannot check the free space successfully and displays it as 0 KB. • The CF Card free space is only an estimate. You may not always be able to save data exactly the size of the free space. • If free space exceeds 65535 (FFFFh) KB, the value of the LS area is 65535 (FFFFh).
External Memory Available Space	<p>Determines whether to save the free space in the external memory to the internal device. The approximate free space in the external memory is displayed.</p>
Free Space Storage Address	<p>Configures the address where the free space in the external memory is saved. For direct access method, the start address should be specified within the range of LS20 to LS2031, LS2096 to LS8999, or USR0 to USR29999. For direct access method, the start address should be specified within the range of 20 to 2031, 2096 to 8999, or USR0 to USR29999. Stores the value within the range of 0 to 65535 (FFFFh) in the specified address. The unit of a value to be stored is in KB.</p> <p>NOTE</p> <ul style="list-style-type: none"> • When no USB storage device is inserted, the GP cannot check the free space successfully and simply displays 0K bytes. • The free space in the external memory is only an estimate. You may not always be able to save data exactly the size of the free space. • If free space exceeds 65535 (FFFFh) KB, the value of the LS area is 65535 (FFFFh).
SRAM Auto Backup	<p>Set whether or not to automatically transfer all the backup SRAM data to the CF Card.</p>

Continued

Setting	Description																			
Control Word Address	<p>Backs up the SRAM data to a CF Card in operating mode. Specify the control address to trigger the backup. The processing status is saved to an address created from the specified control address +1.</p> <div style="margin-left: 40px;"> <table border="1" style="border-collapse: collapse;"> <tr> <td style="padding: 2px 5px;">+0</td> <td style="padding: 2px 5px; text-align: center;">Control</td> </tr> <tr> <td style="padding: 2px 5px;">+1</td> <td style="padding: 2px 5px; text-align: center;">Status</td> </tr> </table> </div> <ul style="list-style-type: none"> • Control Turn On Bit 0 to start the backup. <div style="margin-left: 40px;"> <p style="text-align: center;">15 12 0</p> <p style="text-align: center;">Transfer Trigger Bit</p> </div> <ul style="list-style-type: none"> • Status When the transfer has successfully completed, Bit 0 (Transfer Completion Flag) turns ON. Confirm that Bit 0 is ON, and turn OFF Bit 0 of the control address. The transfer completion bit will then turn OFF automatically. <div style="margin-left: 40px;"> <p style="text-align: center;">15 12 0</p> <p style="text-align: center;">Error Status Transfer Complete Flag</p> </div> <p style="margin-left: 40px;"> [0000]: Completed Successfully [0] ->[1] [0100]: No CF Card [0101]: CF Card Write Error [0111]: CF Card Error </p> <p>The following explains the details of each error code.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Error Code</th> <th style="text-align: center;">Error Name</th> <th style="text-align: center;">Introduction</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">0000</td> <td style="text-align: center;">Completed Successfully</td> <td>When the backup process is completed successfully.</td> </tr> <tr> <td style="text-align: center;">0100</td> <td style="text-align: center;">No CF Card</td> <td>When a CF Card is not inserted at backups or the CF Card hatch is open.</td> </tr> <tr> <td style="text-align: center;">0101</td> <td style="text-align: center;">CF Card Write Error</td> <td>When there is no sufficient free space in the CF Card at backups or the CF Card is removed while the data is written.</td> </tr> <tr> <td style="text-align: center;">0111</td> <td style="text-align: center;">CF Card Error</td> <td>Occurs when the CF Card is unformatted.</td> </tr> </tbody> </table>	+0	Control	+1	Status	Error Code	Error Name	Introduction	0000	Completed Successfully	When the backup process is completed successfully.	0100	No CF Card	When a CF Card is not inserted at backups or the CF Card hatch is open.	0101	CF Card Write Error	When there is no sufficient free space in the CF Card at backups or the CF Card is removed while the data is written.	0111	CF Card Error	Occurs when the CF Card is unformatted.
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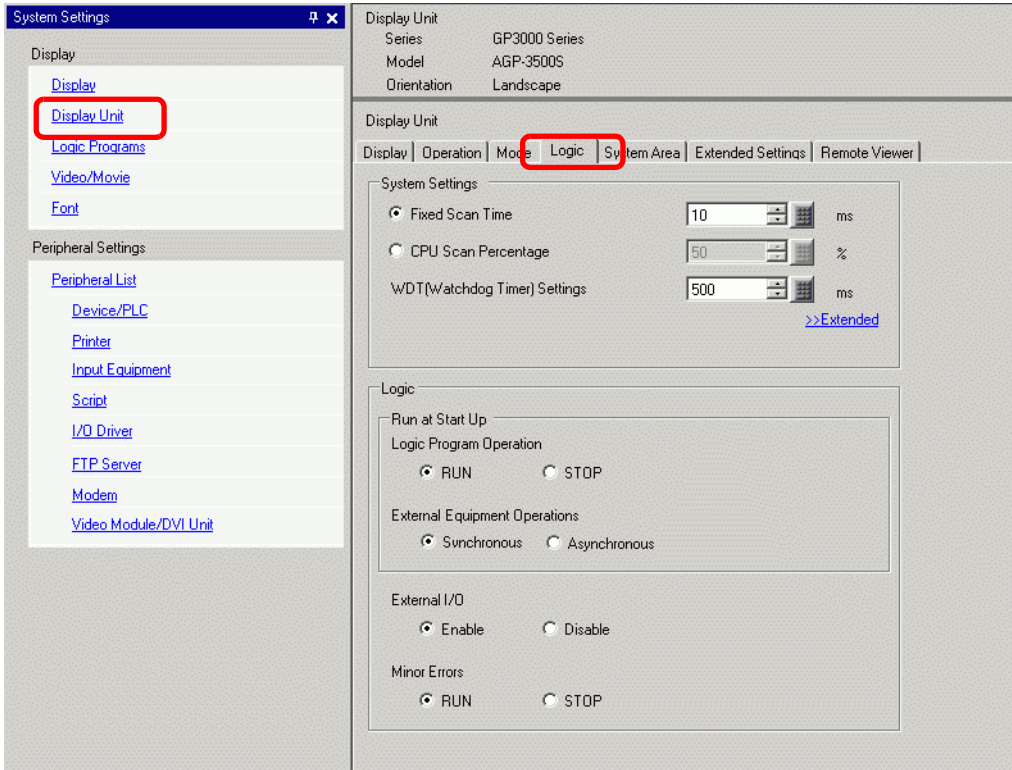
Continued

Setting	Description
<p>Control Word Address</p>	<p>The settings for the Switch are as follows.</p> <div style="display: flex; align-items: center;"> <div style="margin-right: 20px;"> <p>Transfer Trigger Bit (Control)</p> <p>Transfer Completion Bit (Status)</p> <p>SRAM→CF-Card Transfer Action</p> </div> <div style="margin-right: 20px;"> <p>ON</p> <p>OFF</p> <p>ON</p> <p>OFF</p> </div> <div>  </div> </div> <p style="text-align: center;">○=GP turns OFF ◆=Turn OFF the bit</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;">NOTE</div> <ul style="list-style-type: none"> After confirming that the data is not being saved in the CF Card by another feature and that the [Transfer Completion Flag] is OFF, transfer SRAM data to the CF Card. When transferring SRAM data to the CF Card, make sure the [Transfer Trigger Bit] and [Transfer Completion Flag] are OFF at the start of operation in case the power is turned OFF during transfer. Set the time to turn ON and OFF [Transfer Completion Flag] longer than the times set in either ^{*1}[Communication Cycle Time] or ^{*2}[Display Scan Time].

*1 The Communication Cycle Time is the time from when the display unit requests data from the device/PLC, until the display unit receives the data. It is stored in the internal device LS2037 as binary data. The unit is in milliseconds (ms).


*2 Display Scan Time is the time required to process one screen. It is stored in the internal device LS2036 as binary data. The unit is in milliseconds (ms).

◆ Logic

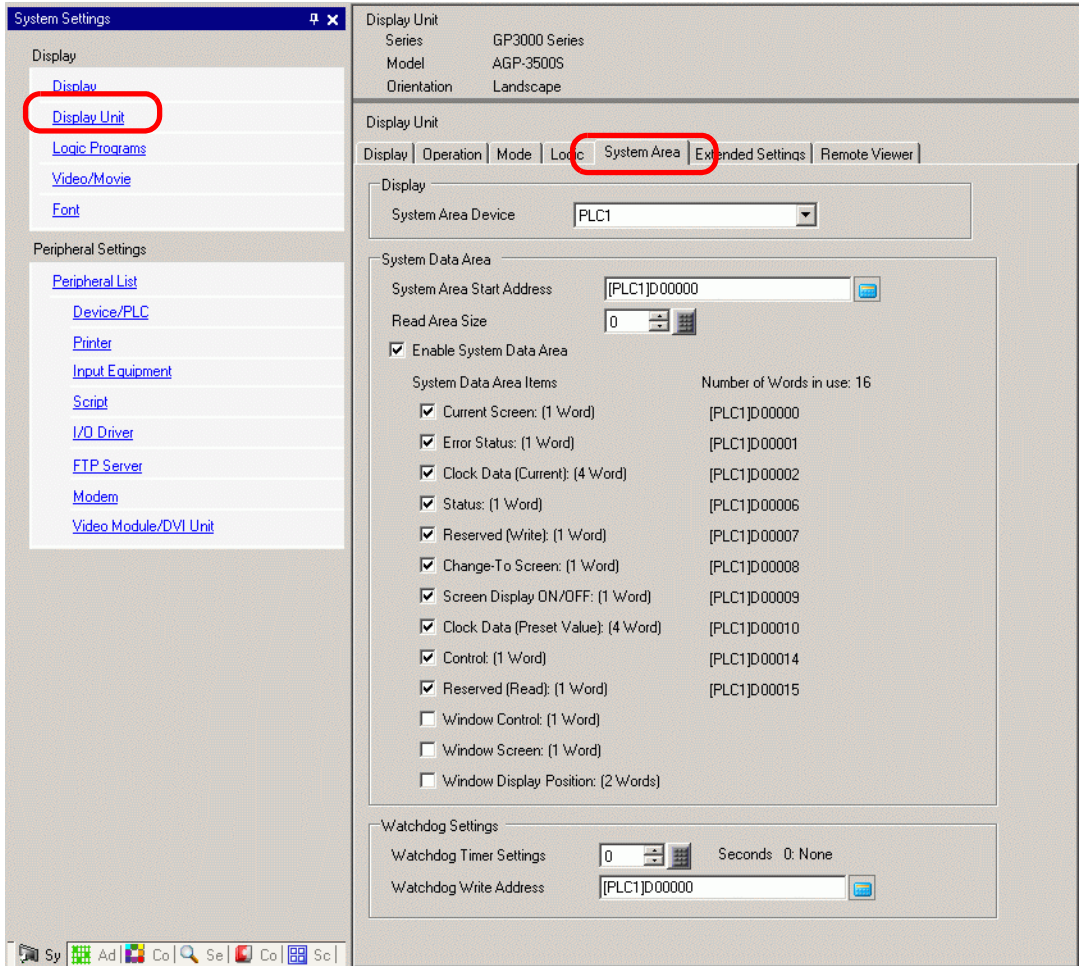


Setting	Description
System Settings	Configures the system settings for logic features.
Fixed Scan Time/CPU Scan Percentage	<p>Selects the mode for logic scan time.</p> <ul style="list-style-type: none"> If you select [Fixed Scan Time], you can specify the logic time occupancy. The settings range from 10 ms to 2000 ms. ☞ "29.13.3 Adjusting Logic Scan Time u Fixed Scan" (page 29-121) If you select [CPU Scan Percentage], you can specify the logic time occupancy. The settings range from 10% to 50%. ☞ "29.13.3 Adjusting Logic Scan Time u CPU Percentage Scan" (page 29-122)
WDT (Watchdog Timer) Settings	<p>You can configure the monitoring time for the logic scan time. An error occurs if the logic scan time exceeds the WDT (Watchdog Time).</p> <p>The settings range from 100 ms to 3000 ms.</p>
>>Extended/<<Basic	[Click [>>Extended]] to specify the [Address Refresh] speed.
Address Refresh	<p>Select the address refresh speed from [Low], [Medium], and [High].</p> <div style="text-align: right; margin-bottom: 5px;"> <<Basic </div> <div style="text-align: center; border: 1px solid gray; padding: 5px; width: fit-content; margin: 0 auto;"> Address Refresh Medium </div> <p>☞ "29.13.3 Adjusting Logic Scan Time n Address Refresh" (page 29-124)</p>

Continued

Setting	Description
Logic	<p>Click [Retentive Settings] to display the [Retentive Settings] dialog box.</p> <p>[Variable Format] specifies the symbol variable retentive/volatile points. [Address Format] specifies the symbol variable retentive/volatile range.</p> <p> "29.14 Settings Guide" (page 29-158)</p>
Run at Start Up	Select an action for the display to perform when it starts up.
Logic Program Operation	Select a logic program status: [Run] or [Stop].
External Equipment Operations	[Synchronous] or [Asynchronous].
Exclude External I/O	Select whether to enable input/output from the I/O unit from [Enable] or [Disable].
Minor Errors	Select the logic program operation [Continue] or [Stop] when a minor error occurs.

◆ System Area Settings



Setting	Description
Display	Specify a device/PLC.
System Area Device	Select the device/PLC to specify the system data area.

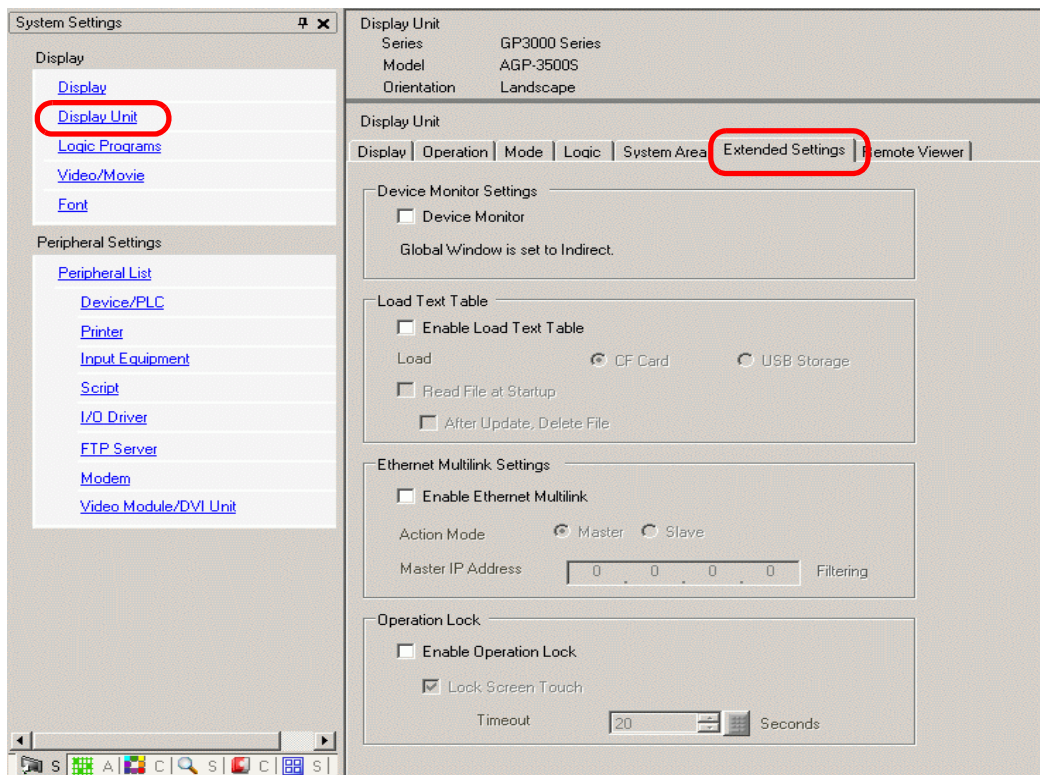
Continued

Setting	Description
System Data Area	Set the system data area.
System Area Start Address	Designate the start address used for the system area.
Read Area Size	Set the number of words in the [Read Area] that stores data used commonly on all screens or the line chart block display data from 0 to 256. NOTE <ul style="list-style-type: none"> Cannot be specified when a device/PLC is connected with the memory link method.
Select System Data Area Items Enable	Set whether or not to enable the system data area.
Select System Data Area Items	Set the system data area items to use. For details of the direct access method, refer to "A.1.4.2 System Data Area" (page A-10), and for the memory link method, refer to "A.1.5.2 System Data Area" (page A-30).
Number of Words in Use	Displays the total number of words for the items specified to the system data area.
Watchdog Settings	Monitors the communication state of the GP and the PLC. The GP writes "00FF" to the PLC word address at every setting time. The PLC confirms at every setting time that "00FF" has been written and that communication is performed.
Watchdog Timer Setting	Set the watchdog's monitoring cycle time from 0 to 65535.
Watchdog Write Address	Set the write address for the watchdog.

◆ **Extended Settings**



Available extensions differ depending on the model. Please check whether your model supports the feature before use.

☞ "1.3 Supported Features" (page 1-5)




Setting	Description
Device Monitor	Specifies whether to use the device monitor feature. NOTE • For the device monitor settings, see below. ☞ "A.2 Monitoring the Value of Device Addresses (Device Monitor)" (page A-46)
Enable Text Table Loading	Specify whether to enable text table loading.
Load	Select the load source of the text table file (CSV file) from [CF card] or [USB storage].
Read file at Startup	Specify whether to read the text table file when starting up the display unit. NOTE • Even though the check box is selected, this does not work until you restart the display unit.
Delete the file after updating	Specify whether to delete the file after updating the text table. This is specified when [Read File at Startup] is enabled.

Continued

Setting	Description
Enable Ethernet Multilink	Specify whether to enable Ethernet Multilink. NOTE <ul style="list-style-type: none"> For information on Ethernet Multilink, see:  "7.7.3 System Settings [Display Unit] - [Extended Settings] - [Ethernet Multilink Settings] Settings Guide" (page 7-46)
Enable Operation Lock	Specifies whether to use the Operation Lock feature. NOTE <ul style="list-style-type: none"> For information on the operation lock settings, see:  "7.7.4 System Settings [Display Unit] - [Extended Settings] - [Operation Lock] Settings Guide" (page 7-48)


◆ Remote Viewer

For Remote Viewer, see the following:


 "37.15.2 System Settings [Display Unit] - [Remote Viewer] Settings Guide" (page 37-80)

◆ IPC Settings

This item only appears when you select [IPC Series (PC/AT)] for the display unit.

 "38.10.1 System Settings [Display Unit Settings] [IPC Settings] Settings Guide" (page 38-164)

■ Logic Program Settings Guide

 "29.14.1 [Logic Programs] Setting Guide" (page 29-158)

■ [Video Module Window] Settings Guide

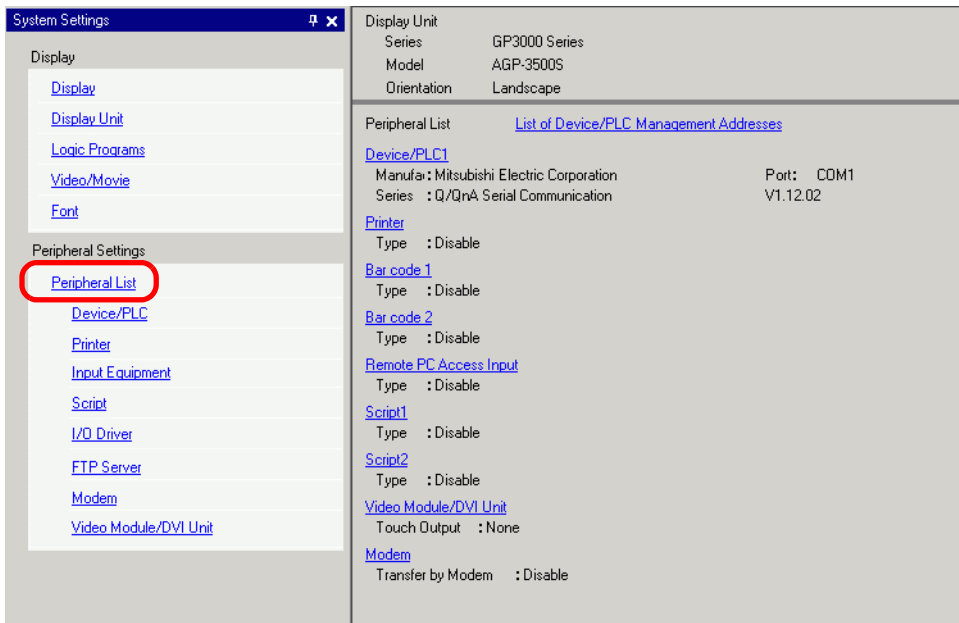
 "27.9.1 [Video/Movie] Settings Guide" (page 27-75)

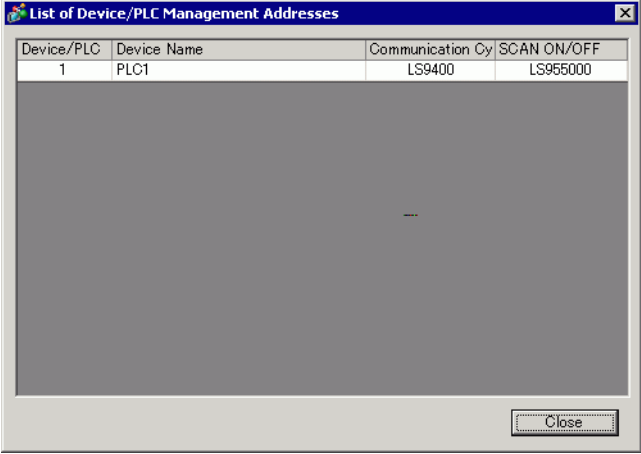
■ [Font] Settings Guide

 "6.4 [Font Settings] Settings Guide" (page 6-18)

■ [Peripheral List] Settings Guide

Displays a list of the specified peripheral devices.



Setting	Description
Description List of Device/PLC Management Addresses	Displays a list of the specified device/PLC management addresses. <div style="text-align: center;">  </div>
Device/PLC	Displays the specified device/PLC Driver number.
Device	Displays the specified device/PLC names.

Continued

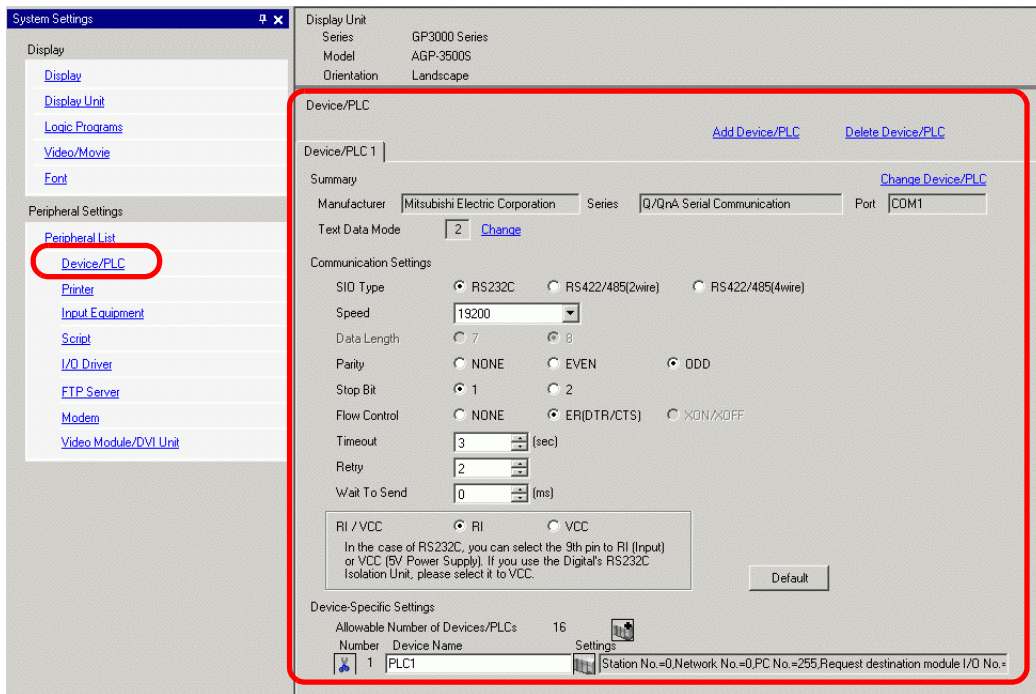
Setting	Description																										
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">List of Device/PLC Management Addresses</p> <p>Communication Cycle Time</p>	<p>Displays the internal device addresses to store the specified device/PLC communication cycle time (unit: ms). The Communication Cycle Time is the time from when the display unit requests data from the device/PLC, until the display unit receives the data. The communication cycle times for each device/PLC when communicating with multiple devices/PLCs are stored using the address scheme shown here.</p> <table border="1" data-bbox="587 413 993 852"> <thead> <tr> <th colspan="2" style="text-align: center;">LS AREA</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">LS9400</td> <td style="text-align: center;">Driver 1, Device Unit 1</td> </tr> <tr> <td style="text-align: center;">:</td> <td style="text-align: center;">:</td> </tr> <tr> <td style="text-align: center;">LS9431</td> <td style="text-align: center;">Driver 1, Device Unit 32</td> </tr> <tr> <td style="text-align: center;">LS9432</td> <td style="text-align: center;">Driver 2, Device Unit 1</td> </tr> <tr> <td style="text-align: center;">:</td> <td style="text-align: center;">:</td> </tr> <tr> <td style="text-align: center;">LS9463</td> <td style="text-align: center;">Driver 2, Device Unit 32</td> </tr> <tr> <td style="text-align: center;">LS9464</td> <td style="text-align: center;">Driver 3, Device Unit 1</td> </tr> <tr> <td style="text-align: center;">:</td> <td style="text-align: center;">:</td> </tr> <tr> <td style="text-align: center;">LS9495</td> <td style="text-align: center;">Driver 3, Device Unit 32</td> </tr> <tr> <td style="text-align: center;">LS9496</td> <td style="text-align: center;">Driver 4, Device Unit 1</td> </tr> <tr> <td style="text-align: center;">:</td> <td style="text-align: center;">:</td> </tr> <tr> <td style="text-align: center;">LS9527</td> <td style="text-align: center;">Driver 4, Device Unit 32</td> </tr> </tbody> </table> <p>NOTE</p> <ul style="list-style-type: none"> • The communication cycle time specified in the system window settings [Display Unit] - [System Area] - [System Area Device] is also stored in the internal device LS2037 as binary data (unit: 10ms). • If LS area is 32 bit, the value is stored in the lower 16 bits. 	LS AREA		LS9400	Driver 1, Device Unit 1	:	:	LS9431	Driver 1, Device Unit 32	LS9432	Driver 2, Device Unit 1	:	:	LS9463	Driver 2, Device Unit 32	LS9464	Driver 3, Device Unit 1	:	:	LS9495	Driver 3, Device Unit 32	LS9496	Driver 4, Device Unit 1	:	:	LS9527	Driver 4, Device Unit 32
LS AREA																											
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:	:																										
LS9495	Driver 3, Device Unit 32																										
LS9496	Driver 4, Device Unit 1																										
:	:																										
LS9527	Driver 4, Device Unit 32																										

Continued

Setting	Description																																									
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">List of Device/PLC Management Addresses</p> <p>SCAN ON/OFF</p>	<p>Displays the internal device address that controls whether to run or stop the set communication scan for the device/PLC. Controls the device/PLC using the displayed bit address as the start.</p> <p style="text-align: center;">LS AREA</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr><td>LS9550</td><td>Driver 1, Units 1 to 16</td></tr> <tr><td>LS9551</td><td>Driver 1, Units 1 to 32</td></tr> <tr><td>LS9552</td><td>Driver 2, Units 1 to 16</td></tr> <tr><td>LS9553</td><td>Driver 2, Units 1 to 32</td></tr> <tr><td>LS9554</td><td>Driver 3, Units 1 to 16</td></tr> <tr><td>LS9555</td><td>Driver 3, Units 1 to 32</td></tr> <tr><td>LS9556</td><td>Driver 4, Units 1 to 16</td></tr> <tr><td>LS9557</td><td>Driver 4, Units 1 to 32</td></tr> <tr><td>LS9558</td><td>Reserved</td></tr> <tr><td>LS9559</td><td>Reserved</td></tr> </table> <p>To stop the communication with the 1st device/PLC of Driver 1, turn ON the LS9550 bit. To resume, turn OFF the bit.</p> <p style="text-align: center;"> LS9550 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 15px; height: 15px;"></td> <td style="width: 15px; height: 15px;"></td> <td style="width: 15px; height: 15px;"></td> <td style="width: 15px; height: 15px;"></td> <td style="width: 15px; height: 15px;"></td> <td style="width: 15px; height: 15px;"></td> <td style="width: 15px; height: 15px;"></td> <td style="width: 15px; height: 15px;"></td> <td style="width: 15px; height: 15px;"></td> <td style="width: 15px; height: 15px;"></td> <td style="width: 15px; height: 15px;"></td> <td style="width: 15px; height: 15px;"></td> <td style="width: 15px; height: 15px;"></td> <td style="width: 15px; height: 15px;"></td> <td style="width: 15px; height: 15px;"></td> <td style="width: 15px; height: 15px;"></td> <td style="width: 15px; height: 15px;"></td> <td style="width: 15px; height: 15px;"></td> <td style="width: 15px; height: 15px;"></td> <td style="width: 15px; height: 15px;"></td> <td style="width: 15px; height: 15px;"></td> </tr> </table> </p> <p>NOTE</p> <ul style="list-style-type: none"> • If you select [Enable System Data Area] for the device/PLC, you cannot turn OFF the communication scan. • If LS area is 32 bit, the value is stored in the lower 16 bits. 	LS9550	Driver 1, Units 1 to 16	LS9551	Driver 1, Units 1 to 32	LS9552	Driver 2, Units 1 to 16	LS9553	Driver 2, Units 1 to 32	LS9554	Driver 3, Units 1 to 16	LS9555	Driver 3, Units 1 to 32	LS9556	Driver 4, Units 1 to 16	LS9557	Driver 4, Units 1 to 32	LS9558	Reserved	LS9559	Reserved																					
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LS9559	Reserved																																									
<p>Device/PLC1 to 4</p>	<p>Displays the memory size of the font used in the user screen area. The user screen area capacity depends on the display model. ☞ "1.3 Supported Features" (page 1-5)</p> <table border="1" style="width: 100%;"> <tr> <td style="width: 20%;">Manufacturer</td> <td>Displays the currently specified device/PLC maker.</td> </tr> <tr> <td>Series</td> <td>Displays the series for the currently specified PLC.</td> </tr> <tr> <td>Version</td> <td>Displays the device/PLC series.</td> </tr> <tr> <td>Port</td> <td> Displays the ports that can be connected to a device/PLC. NOTE <ul style="list-style-type: none"> • If the port is also used for other devices/PLCs, is displayed to the right of the [Port]. </td> </tr> </table>	Manufacturer	Displays the currently specified device/PLC maker.	Series	Displays the series for the currently specified PLC.	Version	Displays the device/PLC series.	Port	Displays the ports that can be connected to a device/PLC. NOTE <ul style="list-style-type: none"> • If the port is also used for other devices/PLCs, is displayed to the right of the [Port]. 																																	
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<p>Printer, Bar Code 1, Bar Code 2, Script 1, Script 2</p>	<p>Displays and edits the settings of the specified [Printer], [Bar Code 1], [Bar Code 2], [Script 1], or [Script 2].</p> <table border="1" style="width: 100%;"> <tr> <td style="width: 20%;">Type</td> <td>Displays the types of the specified peripheral devices.</td> </tr> <tr> <td>Port</td> <td> Displays the connecting ports of the specified peripheral devices. NOTE <ul style="list-style-type: none"> • If the port is also used for other devices/PLCs, is displayed to the right of the [Port]. </td> </tr> </table>	Type	Displays the types of the specified peripheral devices.	Port	Displays the connecting ports of the specified peripheral devices. NOTE <ul style="list-style-type: none"> • If the port is also used for other devices/PLCs, is displayed to the right of the [Port]. 																																					
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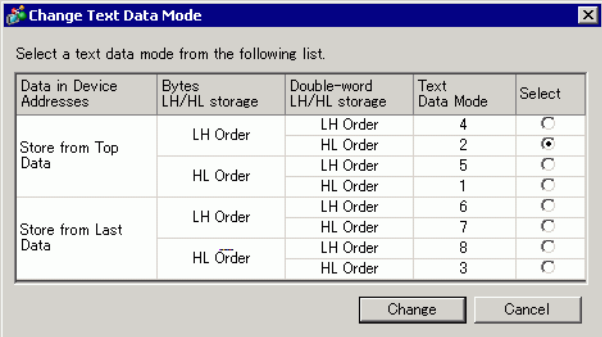
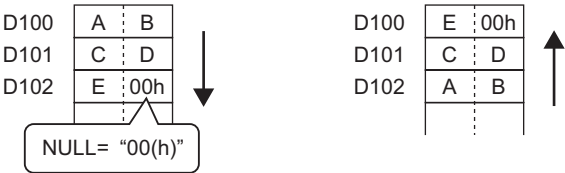
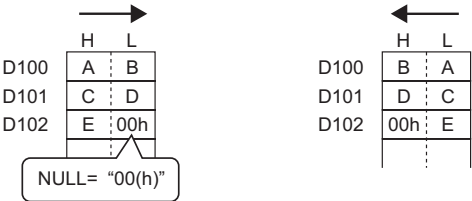
■ [Device/PLC] Settings Guide

Set the details of a device/PLC.



Setting	Description	
Add Device/PLC	<p>Adds the device/PLC settings. Use this setting when one display is communicating with multiple devices/PLCs.</p> <p>NOTE</p> <ul style="list-style-type: none"> The number of device/PLC drivers that the GP can communicate with at the same time depends on the type of GP. <p>☞ "1.3 Supported Features" (page 1-5)</p>	
Delete Device/PLC	Deletes the specified device/PLC.	
Change Device/PLC	Changes the settings of the device/PLC.	
Summary	<p>Displays the settings of the currently specified devices/PLCs.</p> <p>NOTE</p> <ul style="list-style-type: none"> If you select the LT series model, the maker, the series, the ports are fixed as follows. <div style="border: 1px solid gray; padding: 5px; margin: 10px 0;"> <p>Summary Change Device/PLC</p> <p>Maker <input type="text" value="Digital Electronics Corporation"/> Series <input type="text" value="LT Driver"/> Port <input type="text" value="..."/></p> <p>Text Data Mode <input type="text" value="1"/> Change</p> </div> <p>[LT Driver] is the same as [Memory Link].</p>	
	Manufacturer	Displays the currently specified device/PLC maker.
	Series	Displays the currently specified device/PLC series name.


Continued

Setting	Description
Port	Displays the connection port of the currently specified device/PLC. NOTE • If the port is also used for other devices/PLCs,  is displayed to the right of the [Port].
Text Data Mode	Displays the text data mode of the currently specified devices/PLCs.
Change	When the [Change Text Data Mode] dialog box is displayed, you can change the text data mode. Normally the text data mode is specified according to each device/PLC. 
	Select the data device storage order from [Store from Top Data] or [Store from Last Data]. Storing the text "ABCDE". •HL Order LH Order (When the [Text Data Mode] is "8") (When the [Text Data Mode] is "5") 
Summary	Data in Device Addresses
	Select the data storage order to specify in one word (16 bits) from [LH Order] or [HL Order]. Storing the text "ABCDE". • HL Order LH Order (When the [Text Data Mode] is "5") (When the [Text Data Mode] is "4") 

Continued

Setting		Description
Summary Change	Double Word LH/HL Storage	<p>Select the data storage order to specify in two words (32 bits) from [LH Order] or [HL Order]. Storing the text "ABCDE".</p> <ul style="list-style-type: none"> HL Order (When the [Text Data Mode] is "1") LH Order (When the [Text Data Mode] is "4")
	Text data Mode	Displays the combination number of the text data mode storage orders.
	Select	Select the text data mode to be used.
Communication Settings		Configure the settings according to the device/PLC. The settings differ depending on the series. See "GP-Pro EX Device Connection Manual." It is recommended to keep the default settings for [Timeout], [Retry], and [Wait to Send].
Device-Specific Settings		Set this according to each device/PLC.
	Allowable Number of Devices/PLCs	Displays the allowable number of devices/PLCs for the selected device/PLC type.
	[Add Device Button]	Each time you click the [Add Device Button], one device/PLC is added. This cannot be added when the [Allowable Number of Devices/PLCs] is set to 1.
	[Delete Device Button]	Deletes the device/PLC settings.
	Number	Displays the specified device/PLC number.
	Device Name	Set a device/PLC name with up to 20 characters. NOTE • When adding the desired [Device Name], make sure not to use a name that is already in use.
	[Display Unit Button]	Set settings as needed for the device/PLC. Displays the [Individual Display Unit] dialog box. NOTE • The [Individual Display Unit] differ depending on the PLC. For details on the settings of the device/PLC, see "GP-Pro EX Device Connection Manual."

Continued


Setting		Description
Extended Features	Use Program Transfer Feature	This is displayed when you select MP Series Ethernet (Extended) of Yasukawa Electric Corporation for the device/PLC. When selected, the ladder transfer from GP to the device/PLC is enabled.
		<div style="border: 1px solid black; padding: 2px; display: inline-block;">NOTE</div> <ul style="list-style-type: none"> • To transfer to the ladder transfer screen, create a special switch for the transfer device/PLC data.  "10.15.4 Special Switch" (page 10-70) • For more information on the transfer settings, refer to the device/PLC manual for the driver.

■ [Printer] Settings Guide

 "34.6.2 System Settings [Printer] Settings Guide" (page 34-63)

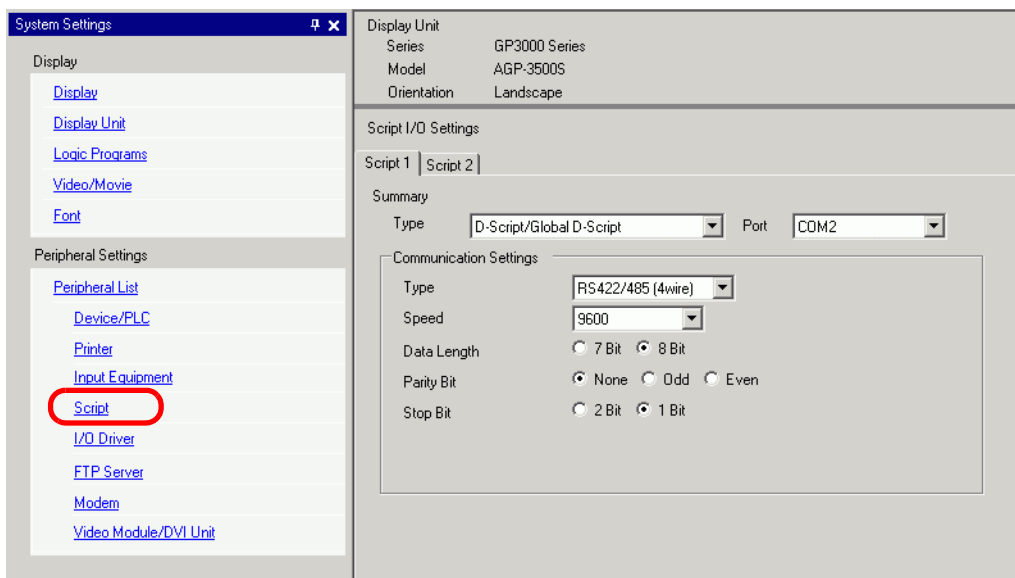
■ [Input Equipment Settings] Settings Guide


 "16.4.1 [Input Equipment Settings] Settings Guide" (page 16-22)

 "36.4.2 System Settings [Input Equipment Settings] - [Remote PC Access Input] Settings Guide" (page 36-27)

■ [Script I/O Settings] Settings Guide

Configure settings to communicate with the device/PLC using scripts.



Setting	Description
Type	Select [D-Script/Global D-Script] to use the "SIO Port Operation" function, which communicates using a serial port for D-Script or Global D-script. Select [Extended Script] to use extended scripts.
Port	Select a port for scripts from [COM1], [COM2], or [USB-SIO]. NOTE <ul style="list-style-type: none"> If the port is also used for other devices/PLCs,  is displayed to the right of the [Port].
Communication Settings	Configure communication settings. NOTE <ul style="list-style-type: none"> This is not displayed when the [Type] is [Do Not Use]. [Communication Settings] differ depending on the device/PLC selected. For details on the settings of the device/PLC, see "GP-Pro EX Device Connection Manual."
Communication Settings	Type Select the communication method from [RS232C], [RS422/485 (4wire)], or [RS422/485 (2wire)].
Communication Speed	Select a communication speed from [2400], [4800], [9600], [19200], [38400], [57600] or [115200].
Data Length	Choose the communication data length from [7 bit] or [8 bit].
Parity	Select the communication parity bit from [None], [Odd], or [Even].
Stop Bit	Choose the communication stop bit length: [1 bit] or [2 bit].

Continued

Setting		Description
Communication Settings	Flow Control	If the communication method is [RS232C], select the communication control method from [None], [RTS/CTS] or [ER (DTR/CTS)]. When [Port] = [USB-SIO], [Flow Control] is set to [None].
	5V Power Supply	If the communication method is [RS232C], designate whether or not to specify the 5V power supply. Only set it to [Enable] if the connected device requires a power supply. If a 5V power supply is not needed and you select Enable, damage can occur to the connected device or the GP. Confirm the specifications of the connected device and cable before setting this.

■ [I/O Driver] Settings Guide

 "30.2.1 I/O Screen Settings Guide" (page 30-8)

■ [FTP Server Settings] Settings Guide

 "27.9.2 [FTP Server] Settings Guide" (page 27-95)

■ [Modem] Settings Guide

 "33.10.2 [Modem] Settings Guide" (page 33-69)

■ [Video Module/DVIS Unit settings] Settings Guide

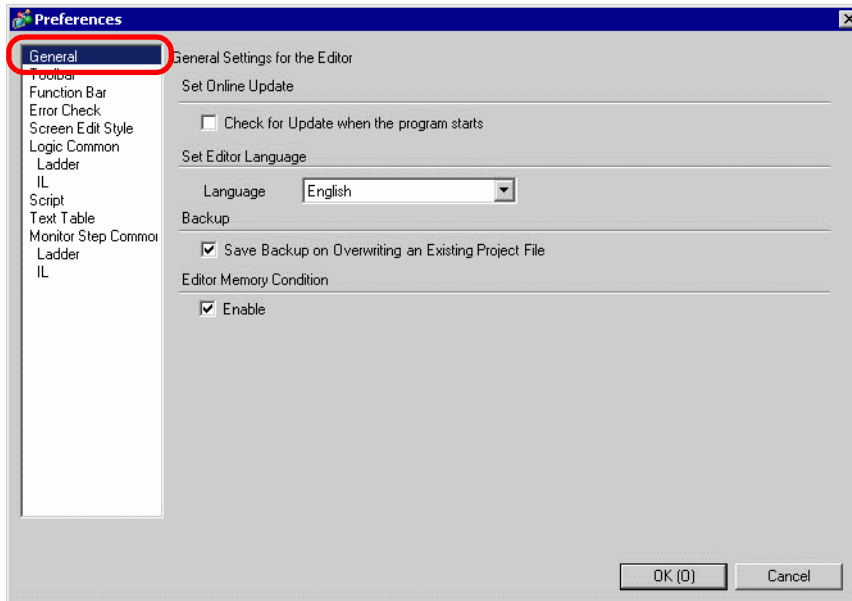
 "27.9.6 [Video Module/DVI Unit Settings] Settings Guide" (page 27-128)

5.17.7 [Preferences] Settings Guide

To open this dialog box, from the [View (V)] menu, select [Preferences (O)].

■ General

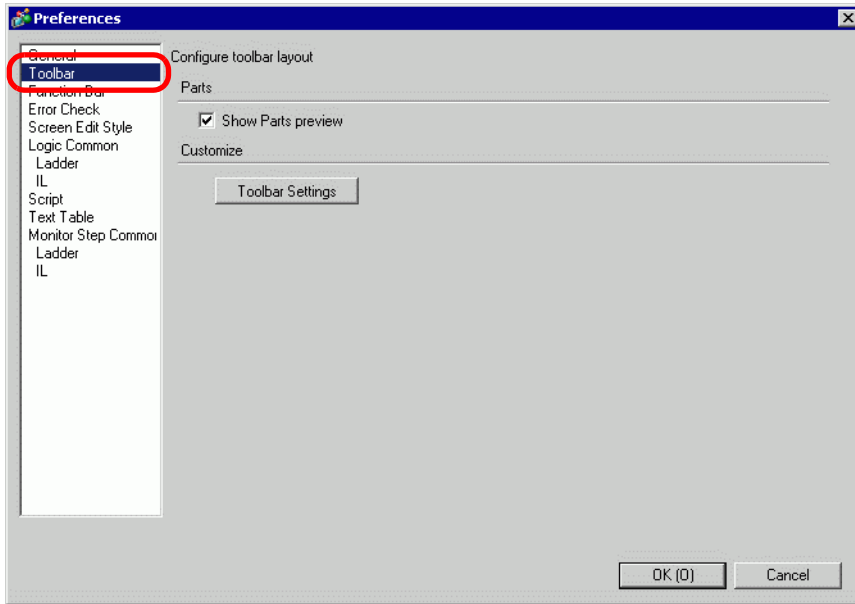
Configure general settings for the editor system.



Setting		Description
Setting Online Updates	Check for Update when the program starts	Set whether or not to perform an online update when the program starts.
Action	Language	Select the language, [Japanese] or [English], used in GP-Pro EX for menus and so on. NOTE • You need to restart GP-Pro EX after making the settings.
Backup	Save Backup on Overwriting an Existing Project File	When overwriting a project file, select whether to automatically backup the file before overwriting. ☞ "5.3.2 Setup Procedure ■ Backup as a History Procedure" (page 5-24)
Editor Memory Condition	Enable	Select whether to use the same screen environment next time. Stores the opened screens, active screens, tile block method, and opened items in the system settings window at the time of exiting. You can keep the environment from the most recent 5 projects.

■ Toolbar

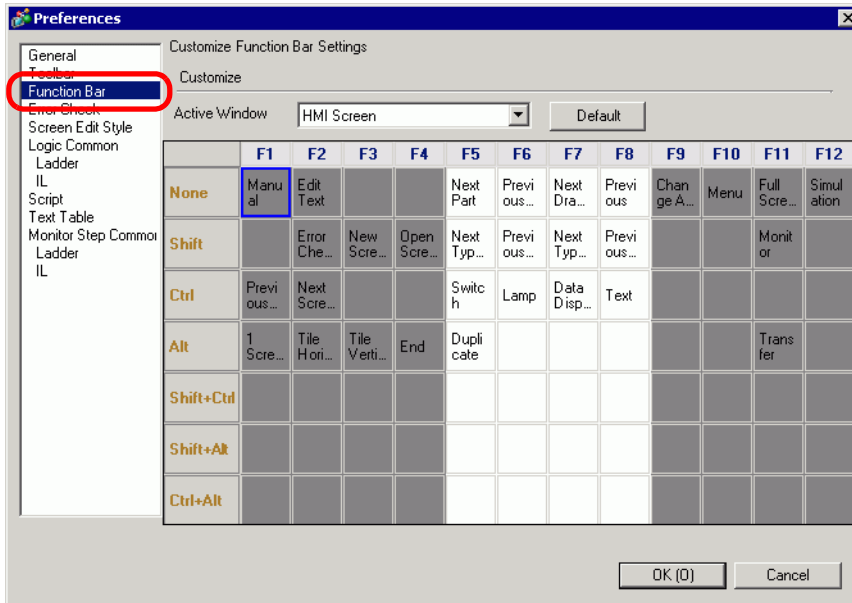
Customize each toolbar.



Setting		Description
Parts	Show Parts Preview	Set whether or not to display a preview of the part when you hover the mouse over the part's toolbar icon.
Customize		Select an icon to display on the toolbar.
	Toolbar Settings	<p>Opens the [Toolbar Settings] dialog box.</p> <p>NOTE</p> <ul style="list-style-type: none"> For the toolbar settings, refer to the following. <ul style="list-style-type: none"> "29.13.8 Toolbar Customization" (page 29-144)

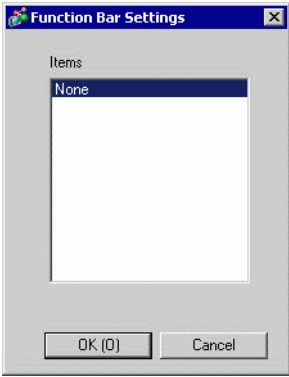
■ Function Bar

Perform Customization Settings for the Function Bar.



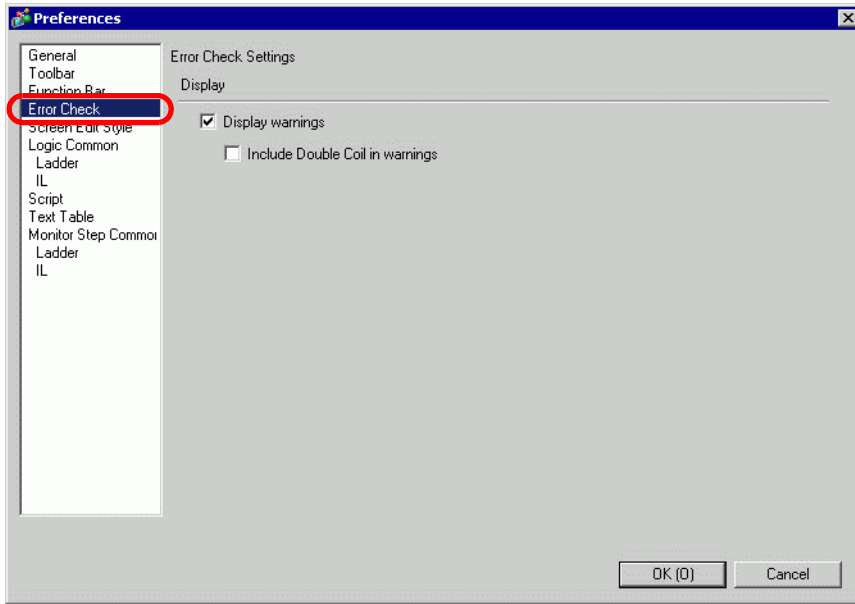
Setting	Description
Customize	<p>Allocate the features selected in the table to the Function Bar.</p> <p>NOTE</p> <ul style="list-style-type: none"> The F1 to F4 and F9 to F12 settings are fixed. Allocate features by combining F5 to F8 keys with other keys. Double-click the square to be allocated (the function key + the keyboard key) to display the [Function Bar Settings] window.
Active Window	<p>Select screens to be set to the Function Bar from the following options:</p> <ul style="list-style-type: none"> HMI Screen Logic I/O Driver Screen Symbol Variable Settings Screen Monitoring <p>You can execute F5 to F8 during Monitoring only when Online Editing.</p> <ul style="list-style-type: none"> All others are active

Continued

Setting	Description
Function Bar Setting	<p>Releases features already mapped to key sequences (F5 to F8 + the keyboard key) and registers to another key sequence.</p>  <p>NOTE</p> <ul style="list-style-type: none">• When you select [None] from the item list, you can reset the features from the squares (F5 to F8 + the keyboard keys) and register them in the dialog box.
Default	Reset the Function Bar on [Active Window] that displays.

■ Error Check

Configures the error check settings.



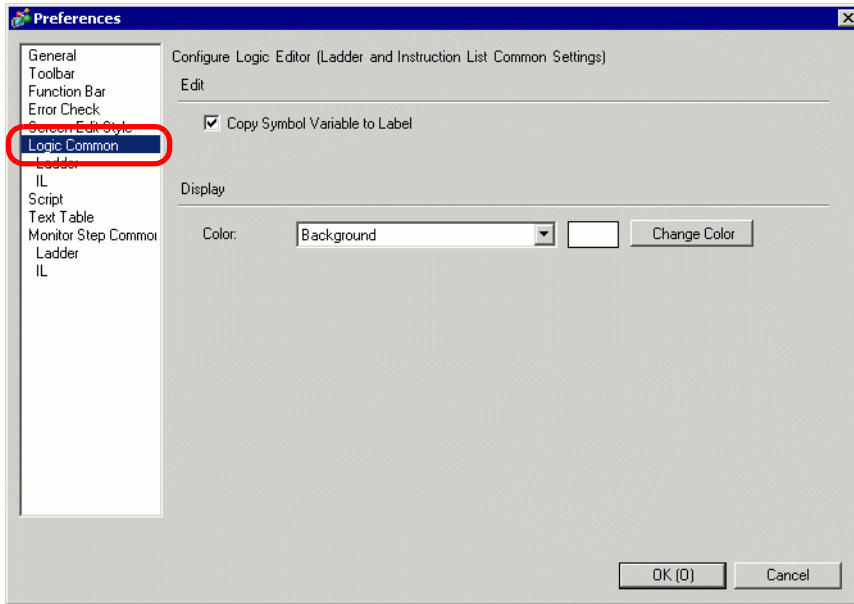
Setting	Description
Display warnings	<p>On running the error check, displays warnings in the error window.</p> <p>When the check box is not selected: Displays only errors.</p> <p>When the check box is selected: Displays errors and warnings (the Error Check Window tab flashes several times, and then a blue light turns on. After the error displays, the screen reverts to its original state).</p>
Include Double Coil in warnings	<p>When the same address is used for multiple purposes, displays a warning in the error window.</p> <p>When the check box is not selected: When there are warnings, or warnings outside the double coil, the Error Check Window tab flashes.</p> <p>When the check box is selected: When there are warnings, the Error Check Window tab flashes.</p>

■ [Screen Edit] Settings Guide

 "8.13.3 Preferences (Screen Edit Style) Setup Guide" (page 8-97)

■ Logic Common

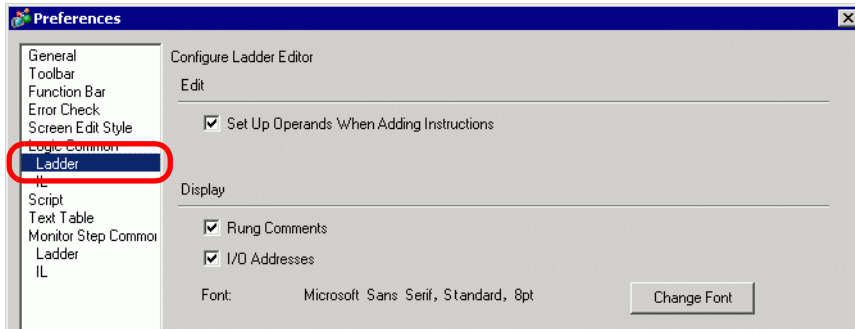
Configure Logic Editor (Ladder and Instruction List Common Settings).



Setting		Description
Edit	Copy Symbol Variable to Label	Drag and drop the Ladder Instructions to which Symbol variables have been allocated to the edit screen and create parts that enable you to set labels (such as Lamp or Switch) to register Symbol Variable names to labels.
Display	Color	Select an item to change color from [Background], [Operand], [I/O Address (Ladder)], [Instructions, Power Bar, Rungs (Ladder)], [Ruled Line (IL)], [SOR (IL)], [Ladder Instruction (IL)], [Branch (IL)], [Label (IL)] or [Unconfigured Display Characters (IL)]. Click [Change Color] and set the color in the displayed dialog box.

■ **Ladder**

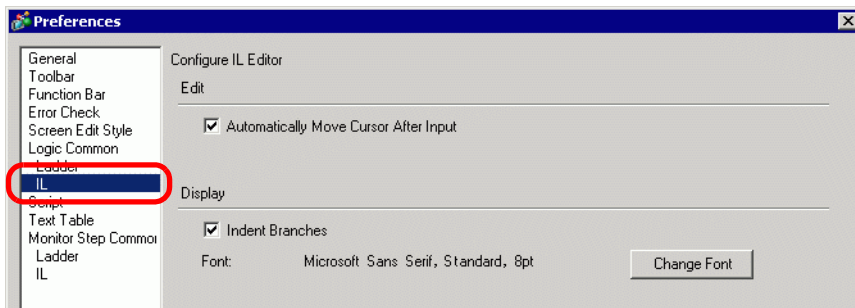
Configures Ladder Editor.



	Setting	Description
Edit	Set Up Operands When Adding Instructions	When inserting ladder instructions during the creation of a Logic Program, set the operand simultaneously.
Display	Rung Comments	Displays rung comments on the ladder screen.
	I/O Address	Displays the I/O address if a symbol variable is allocated to an I/O terminal.
	Font	Set a font used on the ladder screen.

■ **IL**

Configures IL (Instruction List) Editor.



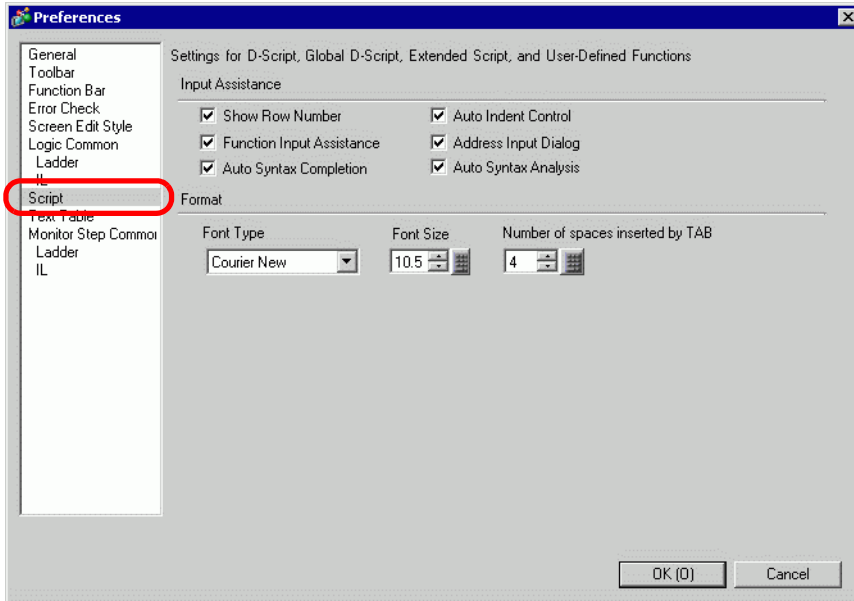
	Setting	Description
Edit	Automatically Move Cursor After Input	Automatically move focus to assist input during editing.
Display	Indent Branches	Indent branch instructions and display.
	Font	Set a font used on the IL Screen.

■ Script

Configure settings relevant to D-Script, Global D-Script, Extended Script, and User Defined Function.

You can also specify these in the [Extended Script] and [Global D-Script] dialog boxes.

☞ "21.9.1 D-Script/Common [Global D-Script] Settings Guide" (page 21-54)



Setting	Description
Input Assistance	Configure settings of input assistance in D-Script, Global D-Script, Extended Script, and User Defined Function.
Show Row Number	Shows the row number to the right of the program.
Auto Indent Control	<p>If you insert line feeds as below, tabs are inserted according to the hierarchy.</p> <pre> Script Expression Area Enlarge Script Expression Area 0001 if (b:[PLC1]D000000)==1 0002 { 0003 if (b:[PLC1]D000100) 0004 { 0005 b:[PLC1]D000200==1 0006 } 0007 endif 0008 } 0009 endif 0010 </pre>
Function Input Assistance	<p>When the function and the initial bracket "(" are typed as below, the function's format is displayed.</p> <pre> Execution Expression Enlarge Execution Expression 0001 memcpy(0002 memcpy(Copy To Address, Copy From Address, No. of Words) 0003 0004 0005 0006 0007 </pre>

Continued

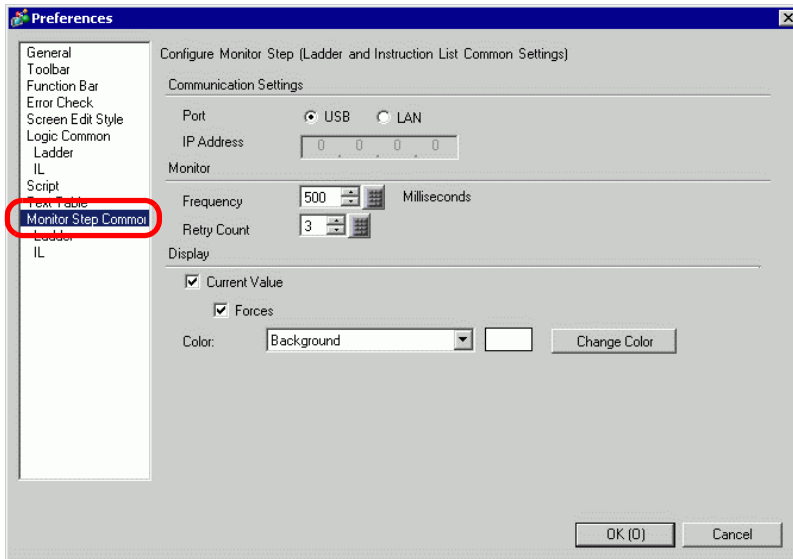
Setting		Description
Input Assistance	Address Input Dialog	When creating a script, type a left-hand square bracket ([]) and the [Input Address] dialog box appears. You can input addresses in this dialog box.
	Auto Syntax Completion	When "if" or "loop" is typed from the keypad, the remaining syntax is completed.
	Auto Syntax Analysis	When creating scripts, the expression is verified. The [Message Area] displays the results if the expression is incorrect. For example, "Line 1: The expression is incorrect."
Format		Set the format for scripts.
	Font Type	Select the font to use.
	Font Size	Set the font size to use from 8 to 72 in increments of 0.5.
	Number of Spaces Inserted by Tab	Set the number of tab key indentations to use from 1 to 8.

■ [Text Table] Settings Guide

 "17.9.3 Text Table Settings Guide" (page 17-62)

■ Monitor Step Common Settings

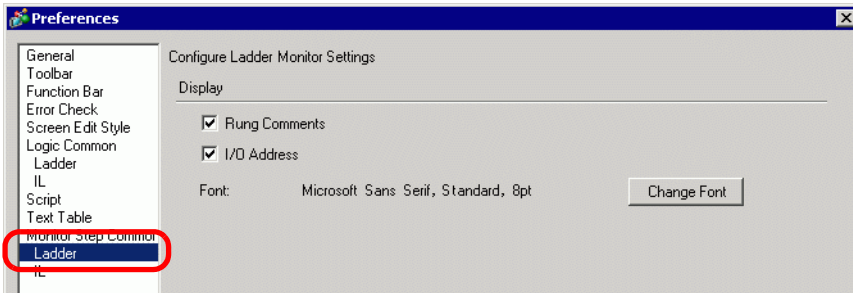
Configures the settings for monitoring logic programs online.



Setting		Description
Communication Settings	Port	Select the communication port for online monitoring from [USB] or [LAN].
	IP Address	If you select [LAN] for [Port], specify the IP Address.
Monitor Settings	Frequency	Specifies the communication frequency from 200 to 3000.
	Retry Count	Specifies the communication retry count from 0 to 10.
Display	Current Value	Displays the current values of symbol variables during online monitoring.
	Forces	Displays values that have been forced during online monitoring.
	Color	Select an item to change the color of from [Background], [Rung Comment], [Instructions, Power Bar, Rungs], [Operand], [I/O Address], [Current Value], [Forces] or [Power Flow]. Click [Change Color] and set the color in the displayed dialog box.

■ **Ladder**

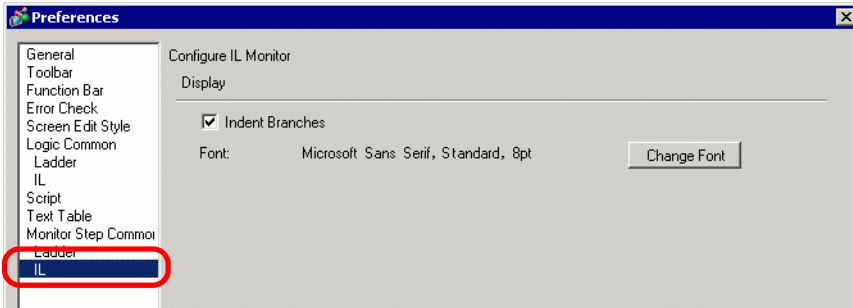
Configures Ladder Monitor.



Setting		Description
Display	Rung Comments	Displays rung comments on the ladder screen.
	I/O Address	Displays the I/O address if a symbol variable is allocated to an I/O terminal.
	Font	Set a font used on the ladder screen.

IL


Configures ILMonitor.




Setting		Description
Display	Indent Branches	Indent branch instructions and display.
	Font	Set the font used on the IL monitor screen.

5.17.8 [Common Settings] Setting Guide

■ Alarm Settings

 "19.10.1 Common (Alarm) Settings Guide" (page 19-69)

■ Sampling Settings

 "24.8.1 Common (Sampling) Settings Guide" (page 24-37)

■ Recipe Settings

 "25.10.1 Common (Recipe) Setup Guide" (page 25-54)

■ Security Settings

 "22.10.1 Common (Security Settings) Settings Guide" (page 22-40)


■ Operation Log Settings

 "22.10.2 Common Settings (Operation Log Settings) Guide" (page 22-52)

■ Time Schedule Settings

 "23.4 Common Time Schedule Settings Guide" (page 23-10)

■ Sound Settings

 "26.5.1 Common (Sound) Settings Guide" (page 26-13)

■ Text Table Settings

 "17.9.3 Text Table Settings Guide" (page 17-62)

■ Global D-Script Settings

 "21.9.1 D-Script/Common [Global D-Script] Settings Guide" (page 21-54)

■ Extended Script Settings

 "21.9.1 D-Script/Common [Global D-Script] Settings Guide" (page 21-54)

■ Image Registration

 "9.5.1 Common (Image Registration) Settings Guide" (page 9-23)

■ Text Registration

 "17.9.2 Common (Text Registration) Settings Guide" (page 17-61)

■ Mark Registration

 "8.13.4 Common Mark Registration Settings Guide" (page 8-102)


■ Keypad Registration

 "15.6.2 Common (Keypad Registration) Settings Guide" (page 15-34)

■ Movie Settings

 "27.9.3 Common [Movie] Settings Guide" (page 27-97)

■ Video Module/DVI Unit Window Settings

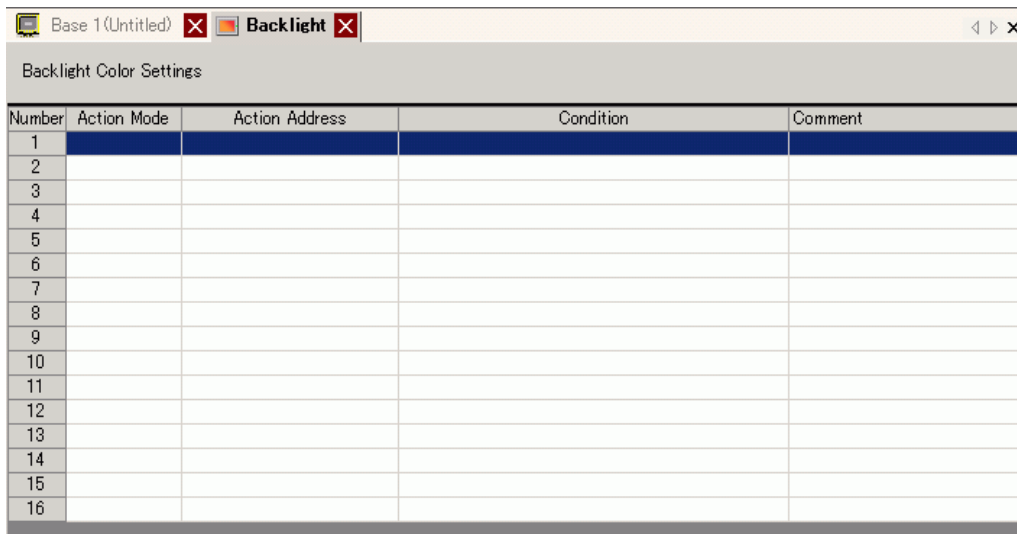
 "27.9.5 Common [Video Module/DVI Unit Window Settings] Settings Guide" (page 27-119)

■ Backlight Color Settings

This feature switches the backlight to red. It is useful when creating warning signals. There are 16 condition settings available.

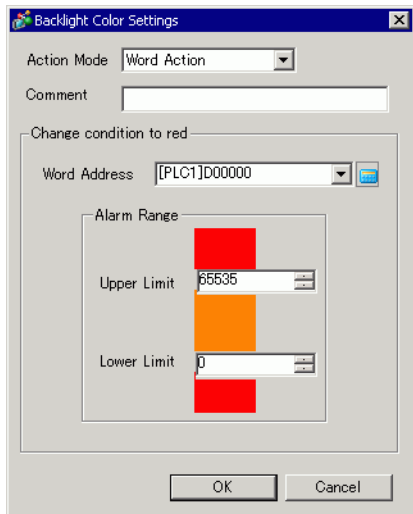
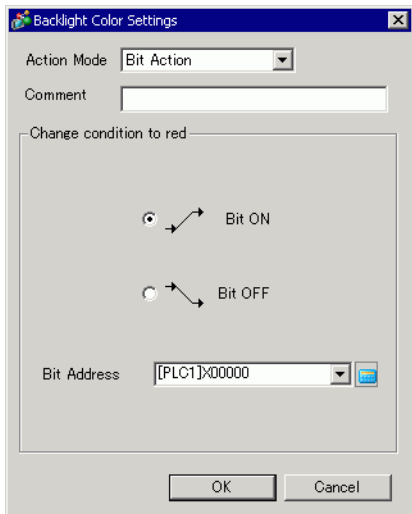
NOTE

- This feature is available to limited models.
 "1.3 Supported Features" (page 1-5)



Setting	Description
Action Mode	Double-click the line to display the [Backlight Color Settings] settings dialog box. The selected settings are shown in the box.
Action Address	
Condition	
Comment	

Selecting [Bit Action] Selecting [Word Action]



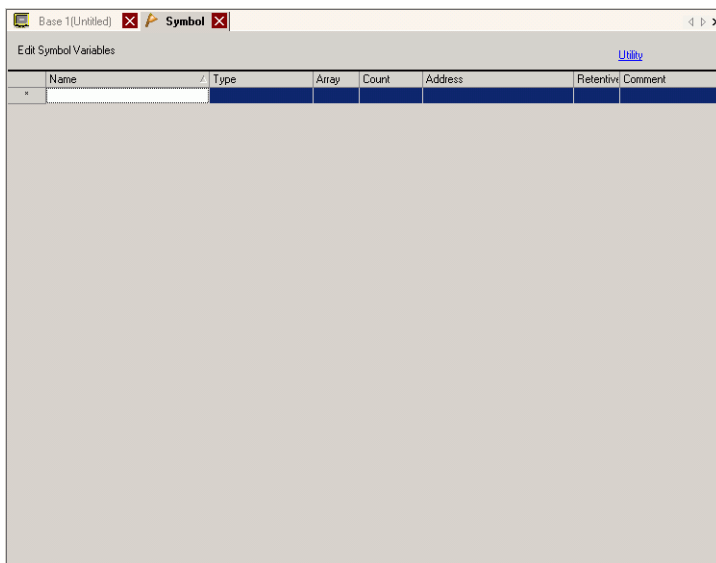
Setting	Description
Action Mode	Select either [Bit Action] or [Word Action].
Comment	Enter your comment using up to 20 characters.
Change condition to red	<p>Configure the conditions for switching the backlight to red.</p> <ul style="list-style-type: none"> • When you select [Bit Action] for [Action Mode] Specifies whether to switch the color to red upon the specified [Bit Address] turning ON or OFF. • When you select [Word Action] for [Action Mode] Switches the color to red when the stored value in the specified [Word Address] is outside the specified range (higher than [Upper Limit] or lower than [Lower Limit]) is stored. The setting range between [Upper Limit] and [Lower Limit] is 0 to 65535.

■ Symbol Variable Settings

Displays the screen for registering symbol variables.

NOTE

- For details about registering symbol variables, refer to the following.
 - ☞ "29.3.2 Using Addresses with Flexible Names (Variable Format)" (page 29-10)
 - ☞ "29.3.3 Using prepared addresses (Address Format)" (page 29-17)



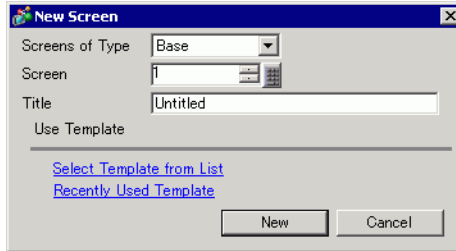
Setting	Description
Name	Specifies the symbol variable name.
Type	Specifies the symbol variable type. When the [Register Variable] is [Address Format], select the address type to display from [Bit Address], [Word Address], [Bit Variable], [Integer Variable], [Float Variable], [Real Variable], [Timer Variable], [Counter Variable], [Date Variable], [Time Variable], or [PID Variable]. When the [Register Variable] is [Address Format], select [Bit Address] or [Word Address] as the type.
Array	Determines whether to specify arrays.
Count	Specifies the array size of an [Array].
Address	If you specified [Bit Address] or [Word Address] for [Type], specify the Device/PLC address.
Retentive	Select Retentive/Volatile.
Comment	Type any comments.
Utility	<ul style="list-style-type: none"> • Import Imports CSV file format symbol variables. • Export Exports CSV file format symbol variables.

5.17.9 [Screen] Settings Guide

This section explains about each item displayed by selecting the [Screen (S)] menu.

■ New Screen

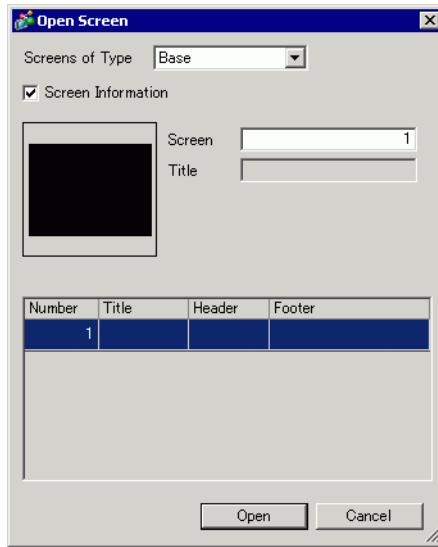
To create a new screen, from the [Screen (S)] menu, select [New Screen (N)].



Setting	Description
Screens of Type	Select the screen type to create or select a template from [Base], [Window], or [Logic].
Screen	If [Base] is selected for [Screens of Type], specify the number of the screens to be created from 1 to 9999, and if [window] is selected, specify the number from 1 to 2000, and if the [Logic] is selected, specify from SUB-01 to SUB-32.
Title	Set the screen title, up to 30 characters, for the new screen.
Use Template	Select a template.
Select Template from List	Displays the [Select Template] dialog box to select a template.
Recently Used Templates	The names of recently used templates are displayed as popup.
Subroutine Parts Enabled	It appears when you select [Logic] in [Screens of Type]. When you newly create a logic screen of a subroutine, you can call the subroutine parts registered as logic parts.
Select Subroutine Parts	<p>Select the registered subroutine parts to create a subroutine program.</p> <p>For more information on [Load Subroutine Part], see: ☞ "29.13.6 Using Previously Created Logic Programs n Calling Logic Parts" (page 29-135)</p>

■ **Open Screen**

Opens a screen.



Setting	Description
Screens of Type	Select the type of a screen to open from [Base], [Window], [Logic], or [I/O].
Screen Information	Set whether or not to display the information and preview of a screen to open.
Screen	Displays the screen number selected on the display list. If you change the number, the preview is changed.
Title	Displays the screen title in the preview.
Display List	Displays a list of all the screens in a project file.
Number	Displays the screen number.
Title	Displays the screen title.
Header	When a Header is specified, the Header [Title] is displayed.
Footer	When a Footer is specified, the Footer [Title] is displayed.

■ Close Screen

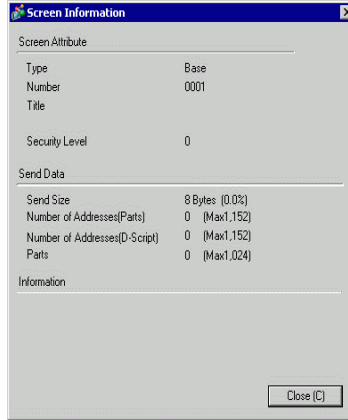
Closes the screen editor.

NOTE

- Click **X** on the right top of the screen editor tab, place the cursor on the screen editor tab and select [Close (Screen Title)] from the right-click menu of the mouse or use a shortcut key to close the screen.

■ Screen Information

Displays the specified screen information.



Setting	Description
Screen Attribute	Displays the screen information.
Type	Displays the type of the specified screen with [Base], [Window] or [Logic]. If you open the [Screen Info] where the Header/Footer can be edited, the Type is displayed as [Header] or [Footer].
Number	Displays the screen number.
Title	Displays the screen title.
Security Level	Displays the screen security level
Send Data	Displays the summary of data to send to the GP.
Send Size	Displays the data size for one screen by the byte. Displays the usage rate of the screen total size in percentage in parenthesis.
Addresses (Parts/D Script)	Displays the total number of addresses being used for the Parts and the D Script in [Number of Addresses (Maximum Number of Addresses)]. If the number exceeds the maximum number of addresses, this displays in red.
Parts	Displays the total number of parts used for screens in Parts.
Information	Displays supplementary information.

■ Previous screen/Next screen

Display the screen with one number before/after the number of currently displayed screen.

NOTE

- The previous screen/next screen feature is not available on movie screens.

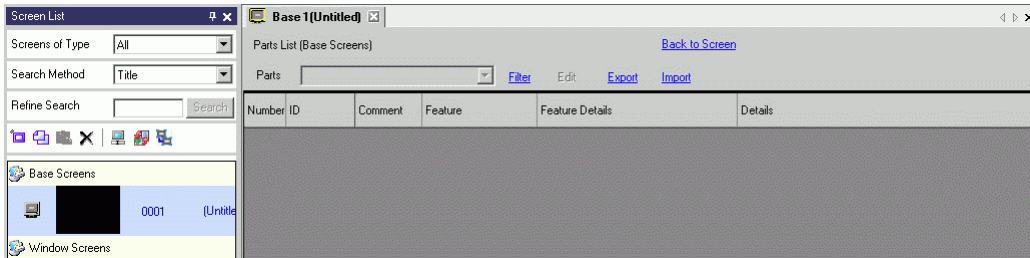
■ **Change View**

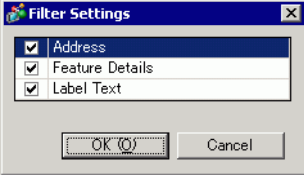
◆ **Edit Screen**

Changes the view to the screen editor.

◆ **Parts List**

Displays a list of the attributes of the parts used on the selected screen. Does not display a list of [Draw], [Trigger Action], or [D-Script].



Setting	Description
Parts	Select the part type to list from all the parts placed on the screen.
Filter	The [Filter Settings] dialog box appears. Set whether or not to display [Address], [Feature Detail], and [Label Text] on the Parts List. 
Edit	Displays the setting dialog box for the part selected from the list.
Export	The [Export Parts List] dialog box appears. Set the destination for saving the [Parts List] in the CSV(*.csv) or text (*.txt) file.
Import	The [Import Parts List] dialog box appears. Set the file in the CSV(*.csv) or text (*.txt) format to import into the project.
Back to Screen	Changes the view to the screen editor.
Display List	Lists the details of parts.
Number	Numbers are sequentially assigned to the placed parts from the oldest, starting from 1.
ID	Displays the part IDs.
Comment	Displays the parts comments.
Feature	Displays the part feature name. For example, Bit - Comparison
Feature Details	Displays the detail text for a part's features.
Address/ Address1	Display List
Label /State 0	Displays the labels specified to the parts. If different labels are specified to each state of a part, a label is displayed for each state.
Introduction	Displays other detailed information such as coordinates where parts are placed. The display contents depend on parts.

■ **Ladder (Only when the Logic Screen is displayed)**

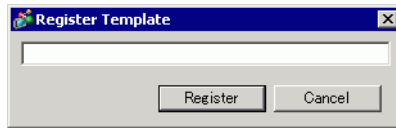
Display Logic Editor View with the Ladder method.

■ **IL (only when the Logic Screen is displayed)**

Display logic editor view with the IL method.

■ **Template Registration**

Register the parts placed on the screen editor except the header/footer as a template.



Setting	Description
Register Template	Define the title for the new template with up to 30 single-byte characters.

5.18 Restrictions

5.18.1 Restrictions for Creating Screens

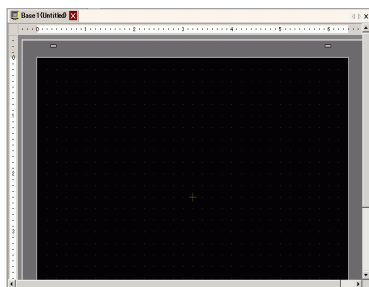
■ Screens of Type

This section covers the types of screens created with project files.

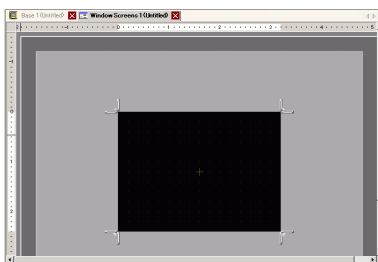
A project file is mainly composed of two screens: a Base Screen and Window Screen. A Base Screen is a screen displayed on the GP. To display a screen on the GP, always use a Base Screen. A Window Screen is a screen called and displayed on a Base Screen. A Window Screen is used to display one screen on top of the other, such as a keypad input.

☞ "12.3 Displaying Windows" (page 12-8)

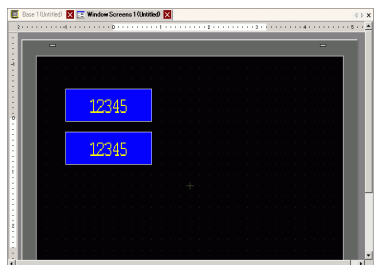
◆ Base Screens



◆ Window Screens

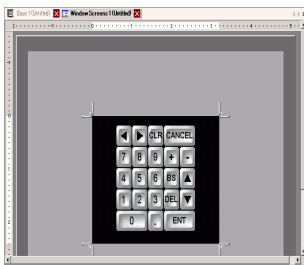


For example:

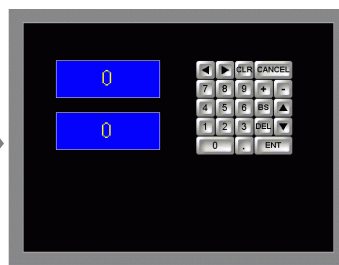


Base Screen

+



Window Screen



Base Screen + Window Screen

NOTE

- The logic screen and I/O screen are used for creating logic programs.
 ☞ "29.2.3 Logic Screen Part Name" (page 29-7)
 ☞ "30.1.2 Mapping Addresses (variables) to I/O Terminals" (page 30-3)

■ Number of Screens that can be Created

Screens of Type	Allowable Setting Number Range for Screens
Base Screen	1-9999
Window Screen	1-2000
Logic	MAIN, INIT SUB-01 to SUB-32

■ Data Capacity per Screen

The maximum capacity per screen is approximately 1 MB. You cannot create a screen exceeding this capacity.

The maximum capacity of the area that can maintain created screen data ([User Screen Area]) depends on each GP model.

☞ "1.3 Supported Features" (page 1-5)

■ Number of Features that can be Placed on a Screen

The maximum allowable number of parts and features placed on a single screen is as follows. This number is for newly created screens without any other settings.

NOTE

- The sum total of the parts that can be placed on one screen is as follows:
When selecting the GP-3400, 3500, 3600 or 3700 Series in Display Unit:
Up to 1024
When selecting the [IPC Series (PC/AT)] in Display Unit: Up to 1280
Models other than those above: Up to 384
- The total number of addresses that can be set on one screen is up to 1152 except the number of address of D-Script. Up to 1153 addresses can be set for D-Script separately.
However, when selecting the [IPC Series (PC/AT)] in Display Unit, you can set up to 3000.

Parts	Feature Type	Base Screen	Window Screen ^{*1}
Alarms	Summary	1	1
	Show History		384
Text Alarm	-	1	1
Graph	Normal Graph		384
	Statistical Graph		
	Meter Graph		
Key Part	-		384
Data Display	Numeric Display ^{*2}		384
	Text Display ^{*2}		384
	Date/Time Display		384
	Statistical Data Display		384
	Limit Value Display		384
Picture Display	ON/OFF Display		384
	State Display		
	CF Image Display		
	Move Display (only when Mark is selected)		30

Continued

Parts	Feature Type	Base Screen	Window Screen ^{*1}
Switch/Lamp	Bit Switch	384	
	Word Switch		
	Screen Change		
	Special Switch		
	Selector Switch		
	Lamp		
Window Screens	Window ^{*3}	384	0
	Global Window ^{*4}		
Movie Player	-	1	
Video Module/DVI Unit Display	-	512 ^{*5}	0
Message Display	Direct Input	384	
	Text Display		
D-Script	-	- ^{*6}	
Sampled Data Display ^{*2}	-	1	1
Historical Trend Graph ^{*7}	-	8	
Data Block Display Graph ^{*7}	-		
Special Data Display	Data Transmission	1	1
	Filing	384	
	Show CSV ^{*2}	1	1
	File Manager	1	0
Trigger Action	Bit Action	384	
	Word Action		
	Screen Change		
	Draw Action		
Remote PC Access (RPA)	-	1 ^{*8}	-

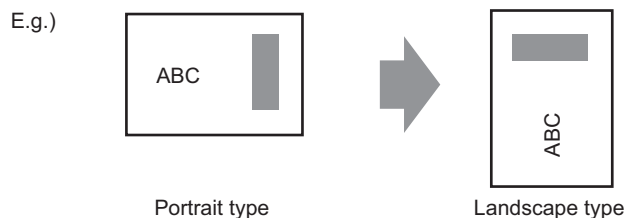
*1 A maximum of three Windows can be displayed on the display screen at the same time. For more details about displaying Windows, refer to the following:
 "12.8.2 Restrictions for Window Screens n Displaying Multiple Windows on a Single Screen" (page 12-31)

*2 You cannot draw a Sampled Data Display and Special Data Display (Show CSV) at the same time. The same applies to drawing a Special Data Display (Show CSV) and a Data Display set up with Allow Input.

- *3 Up to three window parts with the [Continuous Read] option (two if using Global Windows) can be placed on a single screen. If three [Continuous Read] windows are placed on a screen, any additional windows will not operate.
- *4 When the device monitor screen is displayed, the global window cannot be displayed.
- *5 You can display only one Video Module/DVI Unit Window per screen of the device/PLC at the same time.
- *6 The maximum number of D-Scripts depends on the number of addresses you specify per screen (up to 1152) and the screen data capacity (up to 1 MB).
- *7 You can set up to eight [Historical Trend Graph]s and [Data Block Display Graph]s jointly. However, as for Historical Trend Graphs using Historical Display Data feature, you can display only one on each screen.
- *8 When three windows are already displayed (or two when global window is used), this cannot be displayed.

■ Screen Display

- When you change the orientation from portrait to landscape, or from landscape to portrait, the drawing is displayed with 90-degree rotated. From the [Edit] menu, select [Rotate/Flip] to edit. Be sure to check the screen after the change.



- If you change from a high resolution display type to a low resolution display type, the data that exceeds the range is not displayed. If you change back to a high resolution display type, the data that exceeded the range is displayed. The maximum number of display characters on a part differs between a low resolution display type and a high resolution display type. If you change an alarm message created with a high resolution display type to a low resolution display type, any part that does not fall on the message screen is not displayed.
- If you convert resolution, the part size, position, and the text size to the display resolution is adjusted automatically. Some scale magnification may not convert properly due to text size and resolution limitations.
- When you reduce the screen edit area with the zoom function, some drawings may not display correctly, depending on the magnification.

5.18.2 Restrictions on Saving Data

■ Precautions for saving to a CF Card/USB Storage Device

- During data writing onto a CF Card/USB storage, the parts and screen switching actions becomes slower.
- It may take several seconds to write data, depending on the amount.
- After the Status data is read from the GP, be sure to allow time equal to at least one communication cycle^{*1} or one Display Scan Time^{*2} period, whichever is longer, before the next command can be written.
- Do not call up screens that use the CF Card/USB storage when the CF Card/USB storage is not installed on the GP. It may not work properly.
- If a write error occurs, any file that has not finished loading may remain on the CF Card in the USB storage.
- To overwrite and save the CF Card/USB storage data existing, the CF Card/USB storage must have enough free space to allow the data. If the data is larger than the available space, a write error will occur.
- When saving data onto a CF Card or into USB storage and the target folder (\ALARM...) does not exist, the folder is automatically created to save the data. If the folder cannot be created (e.g., if the CF Card/USB storage is not initialized) a write error results.
- The number of times that data can be written on a CF Card is limited. (Approximately 100,000 times for rewriting 500 KB.)
- To format the CF Card/USB storage on your PC, select FAT or FAT32. If you use NTFS for formatting, GP does not recognize the CF Card/USB storage.

■ CF Card Precautions for Use

- When ejecting a CF Card, make sure that the CF Card access LED lamp is turns OFF. Otherwise, the data on the CF Card may be damaged.
- When accessing a CF Card, be sure not to power OFF or reset the GP, or eject the CF Card. Create an application screen on which the CF Card cannot be accessed. On the application screen, you may power OFF or reset the GP, open and close the CF Card cover, and eject the CF Card.
- When inserting a CF Card, check the front and back sides and the connector position of the card. If the CF Card is inserted the wrong way, the data, the CF Card, or the GP may be damaged.
- Use a CF Card manufactured by Digital Electronics Corporation. If a CF Card manufactured by another company is used, the contents of the CF Card may be damaged.

*1 The Communication Cycle Time is the time from when the display unit requests data from the device/PLC, until the display unit receives the data. It is stored in the internal device LS2037 as binary data. The unit is 10 milliseconds (ms).

*2 Display Scan Time is the time required to process one screen. It is stored in the internal device LS2036 as binary data. The unit is in milliseconds (ms).

- Please make sure to back up all CF Card data.
- Please refrain from doing the following, as it can result in damage to data and equipment:
 - Bending the CF Card
 - Dropping the CF Card
 - Spilling water on the card
 - Touching the CF Card's connectors directly
 - Disassembling or modifying the CF Card

■ USB Storage Device Handling Instructions

- While accessing the USB device, do not reset the display unit or remove the USB storage device. The data on the storage device may be corrupted.
 To remove the USB storage device safely, design the system to remove the device only after turning ON system variable #H_Control_USBDetachTrigger and after confirming #H_Status_USBUUsing is OFF.
 ☞ "A.6.2 HMI system variables (#H system variables) n Bit type" (page A-107)
- Please make sure to back up all data on USB storage devices.
- Do not connect more than one USB storage device. If you do so, the USB devices may not be recognized properly.

■ External Memory List for Saving Data

The following shows external memories you can use to save data in (or browse to).

NOTE	<ul style="list-style-type: none"> • Available memories you can use to save data in differ depending on the model. ☞ "1.3 Supported Features" (page 1-5)
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Feature	CF Card	USB Storage	FTP Server
Screen Capture	O	O	O
Image Display on Picture Display	O	X	X
Saving Alarm History Data (CSV File)	O	O	X
Saving Sampled Data (CSV File)	O	O	X
Backup Sampled Data	O	O	X
Recipe (CSV data) Transfer	O	O	X
Recipe (Filing Data) Save	O	O	X
File Display on File Manager	O	X	X
File Manager Copying Feature between CF Card/External Memory	O	O	X
Display on Display CSV Data	O	O	X
Sound Data Save	O	X	X
Movie File Save/Play	O	X	O

Continued

Feature	CF Card	USB Storage	FTP Server
Video Screen Capture (with VM Unit)	O	O	O
JPEG Display on Video Modules	O	O	O
Video Modules (memory loader)	O	O	X
Available Space Check	O	O	X
Backup SRAM Data Save	O	X	X
Offline Memory Initialization	O	X	-
Using the File Operation Function of D Script	O	O	X
Saving the Operation Log	O	O	X

■ Restrictions for Screen Captures

- To capture, it takes about 5 to 6 seconds and file size will be about 200 Kilobyte. When Total Display Digits = 80
- The file size and capture time depend on the image quality and screen size.
- Part displays are not updated during capture.
- If you capture a screen with the Blink option, the captured image is displayed with no blink.
- If you create a file with other actions than screen capture while the CF Card/USB storage device is inserted, the file is overwritten with the next [Auto Increment File Number].
- When you use [Auto Delete File], it may take some time to delete many files. All files are deleted so this can take from a few seconds to a few minutes.

■ Precautions for SRAM Auto Backup

- Make sure the CF Card free space is larger than the backup SRAM size. Free space is checked before the process execution. If there is no sufficient free space in a CF Card, data is not saved in the CF Card.
- When you use the CF Card storage feature, confirm that the CF Card storage control address has no data. You can save the following data in a CF Card: Filing Data, Logging Data, Line Chart Data, Sampled Data (Data Sampling Data), and Alarm Data
- The CF Card storage feature runs before SRAM backup. While SRAM backup is running, writing to the CF Card is interrupted.
- While executing the SRAM backup, the process of CF Card storage feature is interrupted. When automatically writing to the CF Card with the logging feature's loop action, the logging action is also interrupted until writing to the CF Card starts.
- Only one backup file can be saved in a CF Card.
- If you execute [Initialize CF Card] under [Initialize Memory] in GP offline mode, a SRAM folder will be created.
- If you execute CF Card SRAM (Restore) in GP offline mode, all the saved data (such as sampled data) will be replaced with the newly stored data.
- If you execute CF Card SRAM (Restore) in GP offline mode, the adjusted values for Brightness, Contrast, and Sound Volume will not change. The adjusted values will be applied after you turn ON the power again or after the GP goes into operation mode.

- If you execute CF Card SRAM (Restore) in GP offline mode, the stored Japanese FEP learning information will be overwritten. For this reason, the display order of the convert-to characters may change according to the frequency of use.